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ABSTRACT

This is one of three publications prepared by the Ohio State Board of Education to assist schools in implementing a competency based education program, as required by the 1983 revised minimum standards for elementary and secondary schools. This document provides assistance in planning and implementing an effective instruction/intervention component. The first two parts provide suggestions regarding the format and design of the intervention component of the competency program. The introduction defines intervention; discusses administrators' responsibilities; and provides a philosophical overview of the goal, possible approaches, timing, and process inherent in intervention. Part 2 provides a process model for successful intervention programs, and discusses support for the process model, including communication with parents and inservice training. Parts 3, 4, and 5 discuss the elements of effective instructional programs in the three subject areas for which competency programs are required: mathematics, reading, and English composition. Each of these curriculum areas is defined as a teaching/learning process, and examples of intervention activities are thereafter described. Bibliographies are provided at the end of parts 2, 3, 4, and 5 respectively, and these are supplemented by a list of resources in part 6 for general instruction, mathematics, reading, and English composition. (TE)

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FOREWORD

With the adoption of the 1983 minimum standards, the State Board of Education has established conditions to promote a general education of high quality in all chartered schools. The State Board of Education recognizes its responsibility to give direction to the system of education in the state. At the same time, there is flexibility within standards to establish educational programs that are responsive to local needs.

Minimum Standards for Elementary and Secondary Schools 1983 provide the potential for greatly improving education in Ohio. That potential can be reached through well-structured local and state leadership. To assist responsible implementation of minimum standards, staff in the Ohio Department of Education have prepared an implementation series consisting of fourteen documents. A distinction is made among the publications. Only one, *Procedures for School Evaluations*, is a compliance document. It contains the standards in a format readily used for self-evaluation. School personnel will find information about what is needed for a district and schools within the district to comply with standards. In the remaining publications, an effort is made to specify what the standard requires. Additional information, guidelines, procedural steps, and sample forms may go beyond what the standard requires. The purpose is to assist the local planning process, not to prescribe what shall be in every school in Ohio.

Minimum standards address the public's increasing expectations for schools with a requirement for competency based education in English composition, mathematics, and reading. Three of the publications, *Process Model for Course of Study, Competency Assessment and Testing*, and *Intervention* are aligned in addressing competency based education. A number of options are described for local consideration.

Appreciation is extended to school personnel who contributed to these publications by sharing their time, expertise, and materials. Appreciation is also extended to staff members who worked untold hours to make these publications possible.

Franklin B. Walter

Franklin B. Walter
Superintendent of Public Instruction

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PREFACE

Course of Study, Competency Assessment and *Intervention* are three publications that will be helpful in implementing a competency based education program as required by the *Minimum Standards for Elementary and Secondary Schools 1983*. Each of the three documents addresses different aspects of effective competency based education programs. Although each book is designed to stand alone, all three are needed for full implementation. The following descriptions show which document should be used for each phase.

During the early planning stages, Sections One, Four and Five of the *Competency Assessment* document will be most helpful. Included are a list of issues and decisions (Section One), suggestions for how to get started (Section Four) and sample timelines (Section Five).

For suggestions regarding the format for each course of study, see the *Course of Study* document chapters one through three. Chapter four of the *Course of Study* deals with the development of pupil performance objectives for the competency programs in English composition, mathematics and reading.

Many assessment and testing decisions are discussed in Section Two of the *Competency Assessment* document. For each decision several options are evaluated in terms of advantages and disadvantages. In addition, illustrative guidelines for the use of assessment results are offered and considerations related to handicapped students are discussed.

For assistance in planning and implementing an effective instruction/intervention component, see the *Intervention* document. Suggestions regarding the format and design of the intervention component of the competency program are offered in parts I and II. The elements of effective instructional programs in the three areas for which competency programs are required are discussed in parts III, IV and V. In addition, many alternative approaches to intervention in the three areas are detailed and illustrative teaching strategies are offered.

Suggestions for planning a review and evaluating the impact of the competency programs are offered in Section Three of the *Competency Assessment* document.

INTRODUCTION

I. INTRODUCTION

WHAT IS INTERVENTION?

Definition

Ohio's Minimum Standards for Elementary and Secondary Schools, adopted by the State Board of Education on December 13, 1982, define "intervention" as alternative or supplemental action designed to remediate, reinforce, or support pupil learning relative to specified performance objectives. Ultimately, intervention is an instructional action taken when a planned learning activity is judged to be wholly or partially inappropriate for helping a student achieve a desired level of competency.

Characteristics

An intervention action may occur very quickly (within the same teaching period) and involve only immediate, short-range objectives. Or it may consist of steps taken after major blocks of instruction and formal assessment have been provided. Intervention is a process tailored to the individual needs of each student. It begins with an identification of competencies which have not been met. It requires an assessment of the student's prerequisite knowledge, learning capabilities, and particular needs. It entails a survey of available resources and constraints. And it results in the development and implementation of further instructional activities designed to achieve the desired competencies.

Whose Responsibility?

The minimum standards state that "intervention shall be provided according to pupil needs." Intervention is a shared responsibility. Ultimately, each district needs to determine how best to provide this intervention as well as to provide the means to develop/implement an intervention process model to meet the needs of all students within that district.

The teacher is the principal person involved in identifying the need for intervention, in designing the instructional form it will take, and in implementing the actions to be taken. The administrator is responsible for seeing that evaluation occurs within the competency based curriculum and that subsequent instructional actions are taken with those students for whom intervention is necessary. It is the school board's responsibility to provide direction for the intervention program, to supply the means to implement such a program, and to keep the public informed and supportive of this aspect of the competency based education plan. The state department of education has the responsibility to provide leadership in assisting school districts to implement an intervention component in their instructional program and to monitor its progress to assure that each student is provided a quality education.

INTRODUCTION

FOR WHOM IS THIS DOCUMENT INTENDED?

Building Administrator

The pivotal person in the intervention process is the building principal. It is this person who has the responsibility for seeing that all aspects of the instructional program operate smoothly and efficiently. This resource has been prepared primarily for the building administrator to:

- identify those intervention actions which are administrative responsibilities
- explain the nature, intent, and philosophy of intervention which can then be shared with other key groups in the instructional process—teachers, parents, school board
- list specific strategies with reading, mathematics, and written composition which can be applied to improve student performance
- indicate key elements of a successful intervention component of a competency based education program
- describe a planning model for organizing and implementing intervention efforts

Administrative Responsibilities

Leadership in organizing intervention activities at the building level requires the principal to perform several functions:

- provide the necessary inservice to make teachers aware of their responsibilities for intervention
- assist teachers in acquiring appropriate instructional materials for intervention activities
- assist teachers in the use and interpretation of group and individual performance results
- help to design program alternatives as one intervention option;
- schedule and assign students to make individual intervention activities more productive
- enlist the support of others in the intervention process (parents, clinicians, curriculum specialists, school board)
- communicate the components of intervention activities to other interested parties

PHILOSOPHY

Goal

The goal of competency based education is to enable each student to acquire or exceed the competencies set forth in the course of study. Intervention recognizes that progress toward those competencies will not occur in one smooth, well-regulated and uninterrupted sequence. Nor will the same set of learning experiences be appropriate for all learners in achieving desirable competencies.

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Possible Approaches

One response to poor student performance is to recognize that ideas presented are not expected to be mastered yet. They will be the subject of future cyclical approaches throughout the time block. Individual student weaknesses are noted for now and subsequent feedback from selected students will be closely monitored. This might be referred to as an alertness or monitoring action.

A second approach is to halt current instruction, modify it in some way, including total replacement, and complete the activity in such a way that concerned students achieve a desirable level of competence.

A third possibility is to regroup students with similar learning needs. This might occur immediately and be of short, informal duration, or it could take place at the end of a grading period and involve an altered curriculum or retention.

A fourth alternative is to seek additional information by bringing in another party such as a clinician, parent, guidance counselor, or curriculum specialist.

A fifth course of action is to change the mode of instruction by supplementing regular learning activities through filmstrips, use of models, peer tutoring, independent study, learning laboratory, or Individualized Education Program (IEPs).

Timing

Intervention occurs when specific action is taken to alter the learner's originally conceived instruction (content, environment, approach) to enable that learner to attain desired competencies more appropriately. The shorter the time period between recognition for the need to intervene and the actions taken, the more effective such actions are likely to be.

Care in Labeling

Care must be taken not to restrict intervention to remediation or reteaching. Intervention refers to modification of an originally planned instructional sequence. The modification may occur because a learner has failed to respond appropriately to activities designed to develop a particular competency, making review, practice, a different approach, or special assistance necessary. But the modification might also be initiated because the student already possesses the desired competency and could progress more rapidly in a more suitable learning situation. Intervention looks at the individual as a unique entity whose learning style, skills and needs may very likely differ from those of any learning group of which he or she is a part. Competencies define group goals, but those goals can only be achieved on the individual level. Therefore, the means and rate by which competencies are attained or exceeded must be adjusted to the

INTRODUCTION

individual learner. There should be no value assignment to this intervention action. It simply reflects good teaching, good administration, and good curriculum execution.

Teacher Attitude

Instrumental in carrying out intervention is the attitude toward this activity held by the classroom teacher. Assessment is a means of determining teaching effectiveness—not teacher performance. Intervention actions are an integral part of effective learning sequences—not "added activities." Administrative assistance in interpreting competency data indicates shared responsibility and educational teamwork—not restrictive monitoring or usurpation of professional prerogatives.

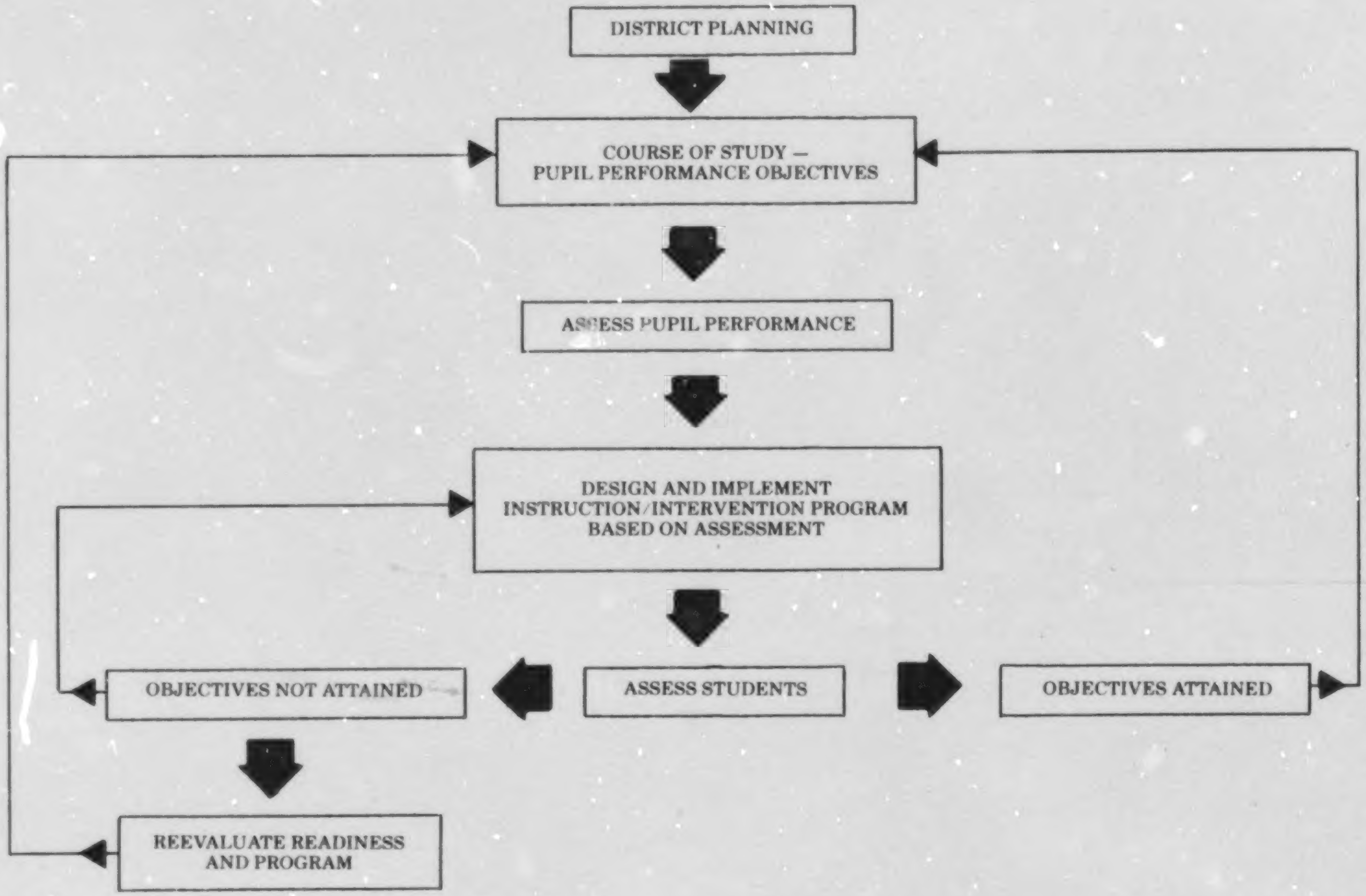
The task is to establish intervention as a part of the total instructional activity, as a shared responsibility, and as a means of assuring instructional effectiveness. New elements are *not* being added to the process. Clarification of intended learning outcomes and follow-through in pursuing their accomplishment are being strengthened. Gathering of data, interpretation of results, and joint decision-making are aspects of shared responsibility and administrative support.

Key Elements in the Process

The success of intervention efforts is related directly to several factors:

- matching of classroom activities to the competencies identified in the course of study
- concurrence on the nature of the outcomes to be achieved by the instructional program
- application of formal and informal assessment procedures to identify competency areas requiring further instruction
- thorough understanding of the developmental steps of the content being taught
- knowledge of and sensitivity to individual learning needs, differences, and stages
- expertise in prescribing alternative forms of instruction
- assumption of responsibility for providing intervention instruction.

INTERVENTION PROCESS MODEL


DISTRICT PLANNING
COURSE OF STUDY — PUPIL PERFORMANCE OBJECTIVES
ASSESS PUPIL PERFORMANCE
DESIGN AND IMPLEMENT INSTRUCTION/INTERVENTION PROGRAM BASED ON ASSESSMENT
OBJECTIVES NOT ATTAINED
ASSESS STUDENTS
OBJECTIVES ATTAINED
REEVALUATE READINESS AND PROGRAM

II. PLANNING FOR INTERVENTION

A PROCESS MODEL FOR SUCCESSFUL INTERVENTION PROGRAMS

Assessing Pupil Performance

The diagnosis of student needs is an immediate concern. Data that are already available should be used to compile information about the student's learning problems and needs. The district's testing program may include achievement/ability comparisons, provide student profiles, or indicate how a student responded to each item in a test instrument. Another source of diagnostic information could be informal assessments conducted by teachers. Additional diagnostic measures may have to be administered when previously acquired information is not available.

Multiple sources of diagnostic information should be used for diagnosing specific strengths and weaknesses that might be very difficult to identify. Specialists should be utilized whenever necessary. A meeting of all persons concerned with a particular student can be called by the principal, the student's needs analyzed by all concerned, and a program or plan of action organized. Classroom teachers, remedial or enrichment teachers, parents, psychologists, and health and social personnel may be involved in the process.

The following worksheet may be used for analyzing student needs:

Student Needs

Student's Name ______________________________ Date __________

Results of assessment:
- Standardized academic assessment
- Criterion-referenced academic assessment
- Other

Specific competencies that need to be learned/enriched:

Diagnosis:
- Student interview
- Assessment results
- Teacher definition of learning problem
- Additional information

Parent concerns/recommendations:

Support staff concerns/recommendations:

Recommendations for instructional alternatives:

PLANNING

Designing the Program: Selecting Or Adapting Alternatives

District personnel will have to make decisions about appropriate alternatives to assist students in achieving performance objectives. Many students may have similar learning needs which can be met through class instruction, while one-on-one instruction may be necessary for other students. A district may have to consider the reallocation of resources to meet the learning needs of students.

District personnel and parents will have many concerns to discuss before alternatives are selected or adapted. These concerns include the alternative learning plans that the district will want to use, how the alternatives will be implemented, and what resources (materials, staff, facilities, and support personnel) will be available. Additional concerns will be the needed supplementary resources, costs of the resources, initial and recurring time periods that will be devoted to alternative plans, and the elimination or adaptation of existing programs.

A district may wish to consider the following options to assist students in the achievement of performance objectives:

1. Classroom special needs group instruction consists of groups that are organized to develop a skill, provide a particular experience, or develop and extend a given objective. When the objective is achieved, the groups are dissolved and new groups are formed to meet other needs. Time for the special needs groups can be found by altering or adjusting the regular classroom schedule.
2. Modification of learning materials within the classroom can be done by the classroom teacher. Students are assisted by the teacher who introduces different materials, modifies existing materials, and classifies materials for use in achieving specific objectives.

In most classrooms, students spend a great deal of time working in the cognitive or thinking domain. The Bloom Taxonomy of Educational Objectives, a commonly used model in educational planning, outlines the hierarchy of cognitive processes as follows (Wooster, 1978):

COGNITIVE LEVEL	STUDENT EXPECTED TO...
KNOWLEDGE	learn specific facts, vocabulary, ideas, and reiterate them in similar form
COMPREHENSION	communicate knowledge and interpret previous learning
APPLICATION	use learned knowledge, rules, ideas, methods in new situations
ANALYSIS	take apart or break down a thing or idea into its parts and perceive the interrelationship
SYNTHESIS	use ideas or elements in new and original patterns and relationships
EVALUATION	make decisions or judgments based on chosen criteria or standards

To differentiate activities based on the Bloom Taxonomy, list the key ideas in a lesson. For each of the key ideas, build KNOWLEDGE and COMPREHENSION activities for use with all students. These activities could introduce basic content and concepts and could be reinforced with existing classroom materials. For students who grasp basic content quickly, less time will be spent with these activities. By modifying existing materials, the teacher could build activities based on the higher levels of the Bloom Taxonomy (Wooster, 1978).

3. Adjustment of classroom instruction to different learning styles of students is accomplished through teachers identifying the strong learning modalities of students and adjusting instruction accordingly. Wooster (1978) suggests that the teacher will need to ponder, observe, interview, and record notes concerning the following:
    - Where does the student learn best?
    - When does the student learn best?
    - With whom does the student learn best?
    - In what learning situations does the student respond well or poorly?
    - To what teaching styles does the student respond best?

If a student is primarily an auditory learner, verbal as well as written directions for assignments should be given. The instructional sequence could be extended or restructured as needed. Long assignments could be broken down into short tasks, with repetition and reinforcement built into the structure. The pace of instruction could be changed by providing a variety of activities within a short period of time, by alternating the types of activities, and by increasing teacher-student contact time. Time should be provided for one-to-one conferences with students so that assistance can be given in the areas of assessment and reassessment regarding the student's progress. Many alternative methods could be used to evaluate the student's learning: projects, interviews, tapes, discussions, and skits.

4. Personalization of classroom instruction in the content areas could begin with an informal assessment that could be constructed in any subject. The student's needs become the basis for the teaching activities. Content should be analyzed to locate the most important sections needed for achieving objectives. Assignment length could be varied, and different degrees of understanding could be required to correspond to student differences. Use media wisely to supplement instruction. Schedules should reflect a balance of individual, small group, and total group experiences.

   By differentiating instructional activities in the content areas, instruction could be personalized, as shown in the following examples from Wooster (1978):

   - While some students are reviewing an outline form in a teacher directed lesson, other students can apply the outline skills to an independent library research project or develop a topic outline for a future project.
   - While some students are reviewing a worksheet with basic color words, other students can design a game to be used in the review of color words or can interview students about favorite colors.

5. Corrective classroom instruction is designed to meet the immediate needs of students. Skill problems should be detected in the early stages; preventive strategies administered; and regular, consistent correction and enrichment delivered to students.

PLANNING

6. Learning modules are self-instruction packages containing a set of learning experiences which may be purchased commercially or developed by teachers to meet specific needs. The modules are usually organized with a statement of rationale directed to the learner and objectives which state the expected learning results. Following a pretest to determine needs, learning activities are available to help students attain the objectives. Posttesting follows the completion of activities.
7. Programmed or computer assisted instruction can consist of carefully constructed information units which are presented in a sequential manner. The learner is guided through the sequence until a specified performance level is reached. Care should be taken to select the materials that are designed for particular objectives.
8. Learning contracts are mutual agreements that may be entered into by the student, teacher, and parent. Contracts could be used to accompany library books, content reading assignments, and books in special interest areas. Contracts allow students to be exposed to content at an appropriate level of difficulty, to work independently at their own rates, and to spend appropriate amounts of time on relevant activities.

   Students could help design learning contracts. Objectives to be learned should be outlined, and the signatures of the participants affixed to the contract in order to add credibility to the process. The following is an example of a learning contract:

Learning Contract
For An English Assignment

Name ______________________________ Beginning Date ____________________

Instructor __________________________ Ending Date ____________________

I, ____ agree to do the work described in this contract by the date indicated above. If I need any

help, I will ask ____, a fellow student, or the teacher. If I still have difficulty, I will ask for a new contract.

CONTRACTED WORK:

Projects ____

Themes ____

Worksheets ____

Other ____

Signatures

____
Student

____
Teacher

____
Parent

COMMENTS: ____

____

PLANNING

9. Diagnostic/prescriptive teaching could be effectively used in the regular classroom where students display a wide variety of ability levels. The teacher will need to diagnose those levels in order to select activities for skill development. In the regular classroom, where class size makes diagnosis a time consuming process, the teacher is constantly diagnosing the needs of students whether he or she is aware of it or not. The manner in which a student responds in discussion activities, the degree of independence the student exhibits during class, and the quality of a student's reporting all offer clues which aid the teacher in diagnosing needs.

   Following diagnosis, the teacher and the student could cooperatively develop an instructional plan. Individual conferences could provide additional information and an opportunity for the teacher to check the student's progress.

   Two types of records should be considered when using the diagnostic/prescriptive approach. The first is the teacher's record which serves to promote a balanced program and is an aid for planning and evaluating the student's activities. It should be kept as simple as possible and should include pertinent information regarding the student's difficulties, assigned activities, and progress. The second type is the student's record which the student could keep up-to-date. For younger students, record keeping could consist of listing books read or words learned. Older students could record information on charts or graphs.

10. Integrating performance objectives in the regular curriculum could be handled in the following manner:
    - provide a bank of suggested activities coded to each objective
    - provide an inventory of resources and instructional materials coded to each objective
    - appoint a member of the staff at each level as a resource person for specific performance areas
    - encourage teachers to exchange classes for specific purposes

11. Tutoring could assist a student who needs intensive instruction in specific objectives. It may be used to reinforce, review, or extend skills already presented in the classroom. Materials should focus on the objectives and on the student's learning style and interests. Tutoring may occur during a study hall period, before or after school, or during the school day.

The tutor could be a certificated teacher, teacher's aide, another student, parent, or volunteer. Matching a student to an adult or older student can offer intensive real world experience and provide expertise in special interest fields. Matching a student with a student of a similar age or older can increase the tutored student's motivation, encourage the student to interact, and provide him or her with the security of knowing someone who thinks, feels, and talks in similar ways. In peer tutoring, a student is paired with another student of the same age. In cross-grade or cross-age tutoring, upper-grade students work with lower-grade students.

12. Resource rooms are specially designated rooms which contain varied materials for all grade levels. They should be available to students who need opportunities to learn in specific subject areas. Students from several grade levels could be scheduled into the resource room on a regular basis to work on objectives. The room serves as an extension of the regular classroom and will require staff cooperation and the coordination of instructional plans.
13. Supportive and remedial instruction could be provided by district support personnel in reading, mathematics, or writing. The setting would be similar to a classroom, and materials should be differentiated to meet individual student needs. Instruction should be designed to focus on identified objectives, and could be one-to-one, independent, or small group.
14. Home, school, and social agency work together when the teacher has used all available instructional alternatives at the school level and the student still has not achieved the performance objectives. The teacher may request additional support from the principal who may need to contact the school social worker, children's social services, school psychologist, or community guidance center to explore other alternatives. Working with the student's home, the social worker may enlist other support services that will focus on alleviating needs that may be hindering learning. Nurses and social workers are often able to gain support from parents that will help the student.
15. Independent study projects provide a means by which a teacher could differentiate instruction for students who need enrichment activities. The project could be planned cooperatively by the teacher and the student. A core of questions could be written with emphasis on higher cognitive processes (application, analysis, synthesis, and evaluation). After the student has completed introductory study, which usually involves knowledge and comprehension work, follow-up activities focusing on higher level thinking processes should be required (Wooster, 1978).

PLANNING

Implementing Instructional Objectives

Consideration should be given to the most effective and efficient ways to implement the instructional plans. The following questions (Hall & Jones, 1976) should be considered by the district:

1. What resources are needed?
2. Are the desired results being achieved?
3. What changes are needed?
4. What are the expected learning outcomes?
5. Is additional staff inservice needed?
6. What is the actual cost?
7. Can the district's resources support the alternative on a regular basis?
8. What are the maintenance costs?

The following worksheets may be used by the school district to assist in the selection of instructional alternatives:

Worksheet for School District Selection for Instructional Alternatives

Name ______________________________ Grade Level __________

Instructional Alternative	Currently Available	Could Be Improved
1. Classroom Special Needs Groups		
2. Modifying Learning Materials Within the Regular Classroom		
3. Adjusting Regular Classroom Instruction to Different Learning Styles		
4. Personalizing Instruction in the Content Areas		
5. Corrective Classroom Instruction		
6. Learning Modules		
7. Programmed and Computer Assisted Instruction		
8. Learning Contracts		
9. Diagnostic/Prescriptive Teaching		
10. Integrating Performance Objectives into the Regular Curriculum		
11. Tutoring		
12. Resource Rooms		
13. Supportive and Remedial Instruction		
14. Home-School-Social Agency		
15. Independent Study Projects		
16. Other		

Worksheet to Analyze Staffing Needs

Instructional Alternatives	Who does the remediation/enrichment?									
	parent	classroom teacher	remedial teacher	certificated tutor	aide	volunteer	student tutor	parttime teacher	teacher to be employed	other
1.										
2.										
3.										

Assessment: Determining Whether Needs Are Met

School district personnel must determine whether the remediation, support, or reinforcement activities have been successful. When the student can demonstrate attainment of the objectives, needs will have been met.

Attainment of performance objectives should be demonstrated through formal and informal assessment techniques and through testing techniques such as the following:

1. Assessment techniques could include such measures as observation/anecdotal records, observation/behavioral checklists, self report inventories compiled by students, and interviews containing student opinions of other students' performances. Rating scales and ranking or ordering by merit are measures which can be completed by peers or teachers.

   Classroom paper and pencil assessments can be constructed by teachers to measure objectives taught in the classroom. These assessments may follow the format of an essay, writing sample, sentence completion, or multiple choice.

2. Testing techniques could include grade level paper and pencil tests which measure objectives agreed upon by all teachers at the grade level. Whether the format of essay, writing sample, multiple choice, or sentence completion is used, the tests should be administered and scored uniformly in all classrooms.

   Commercially prepared criterion-referenced tests compare performance to the underlying criterion. Norms are often available, and tests are usually objectively scored measures of specified pupil performance objectives.

   Commercially prepared norm-referenced tests are usually machine scored multiple choice measures of objectives. Results compare performance to that of a specified norm group. Information relating to item analysis is usually available.

   When performance objectives can be measured by matching or by multiple choice tests, a standardized norm-referenced achievement test battery containing reading, language, and mathematics items can be selected to measure objectives identified by the district.

   When students are required to demonstrate competency by writing a composition, reading aloud, or solving a mathematical problem, consideration should be given to the development of measures agreed upon by teachers.

3. It is often difficult to allow for grading and evaluation differentiation within the framework of conventional grading systems and school policies. According to Wooster (1978), *two options* that could be considered by the district are reporting to parents through conferences and maintaining an evaluation folder for each student. Reporting to parents through conferences should involve all teachers who work with the student, along with the parent and the student, where applicable. Discussion should center on the student's progress, strengths, needs, and future plans. School reporting forms, special projects, and classroom work done by the student could be reviewed during the conference. Maintaining an evaluation folder would involve collecting examples of the student's work, diagnostic check-ups in skill areas, anecdotal records, special projects materials, and student record keeping.

When all available resources and reasonable efforts have been focused on the students' learning needs and some students do not demonstrate attainment of the objectives, the following could be considered:

- district personnel may determine what further instruction would be beneficial to the students
- those involved in analyzing needs and planning the initial alternatives could again be consulted
- an appeal committee could be created to make judgments about students' performances and the educational program that was provided.

SUPPORT FOR THE PROCESS MODEL

Communicating With Parents

When assessment indicates the student is experiencing difficulty achieving performance objectives, the school personnel must contact the parents. Contact can be accomplished through conferences and written reports. Additional contact should be made between conferences and reports.

During the contact, it should be indicated to parents which of the objectives have not been attained, what alternative instructional plans are available in the district, and what is being done at school to help the student. Parents should understand that each person involved in the intervention process has responsibilities that must be met if desired outcomes are to be achieved. When reassessment is completed, the results should be shared with the parents.

PLANNING

Providing Inservice

Relevant inservice activities should be implemented when necessary. A regular, planned program of inservice is encouraged for district personnel. The following steps should be considered when implementing inservice related to intervention strategies:

1. Identify staff needs.
2. Ensure that teachers have input into the planning.
3. Design staff development activities that are related to areas of pupil performance objectives such as:
    - analysis of assessment data
    - diagnostic instruments
    - prescriptive teaching
    - selecting, developing, utilizing instructional materials
    - classroom remediation, reinforcement, enrichment techniques
    - utilizing content material for remediation, support or reinforcement activities
    - learning styles or modalities
    - instruction for specific skill deficiencies
    - grouping for special needs
    - ongoing communication with parents
4. Contact area colleges/universities that could provide inservice programs to prepare teachers to deal effectively with intervention strategies.

Many of the examples used in this section were taken from the *Competency Handbook,* Ohio Department of Education, 1978.

PLANNING

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III. INTERVENTION IN MATHEMATICS

THE TOTAL TEACHING PROCESS

The mathematics course of study sets forth program objectives spanning several grade levels that give direction to the total program. These objectives assure a smooth articulation of experiences for instruction spanning several grade levels and involving more than one teacher. At each grade level, the course of study spells out in more specific detail objectives for instruction occuring under the tutelage of an individual teacher. These sets of program objectives and subject objectives make up the principal outcomes and competencies to be achieved by the majority of learners undertaking this sequence of instructional experiences.

The course of study delineates the structure and organization of the mathematics curriculum. It does not specify how the objectives are to be achieved with individual learners, nor does it attempt to spell out specific activities to be used to accomplish these objectives. These responsibilities fall to the professional discretion of the teacher who must take a set of learners, an array of individual needs, a set of desired outcomes, a set of conditions, and his/her own teaching style, and weave these into a set of daily experiences that will achieve the desired ends.

This is a complex, challenging, and highly fluid process. It demands a great deal of training, dedication, enthusiasm, planning, and hard work. The process is so dynamic that it requires constant adjustment, reassessment, and reflection. An effective daily lesson plan should identify specific outcomes and activities intended to achieve those outcomes. Part of that lesson plan should include specific activities designed to ascertain how the class has responded to the mathematics instruction and to what degree students have attained the desired subject objectives. The teacher then responds to this feedback by reteaching, regrouping, replacing, or continuing the activity. A vital component of effective instruction is the formal and informal assessment that redirects, rechannels, or reinforces the course the instruction is taking. Only by having specific objectives in mind, activities designed to achieve these objectives, and assessment to determine to what extent the instruction has been successful can effective mathematics education be delivered. (For additional information, see *Process Model for Course of Study* in the Implementation Series.)

ELEMENTS OF AN EFFECTIVE MATHEMATICS PROGRAM

Within an effective mathematics program, appropriate attention will be given to four levels of outcomes: (1) skills/concepts; (2) processes/knowledge; (3) applications; (4) problem solving.

Mathematics is first a language for communicating and thinking about quantitative ideas. To be able to think effectively and communicate with others, certain tools and vocabulary are needed. These are comprised of the terms, basic facts, and fundamental concepts that make up this discipline. Outcomes associated with this level are the easiest to state, the simplest to measure, and the most likely to be achieved.

addend is a term; $18 \div 3 = 6$ is a basic fact; *five* is a concept for conveying *how many* for a group of objects.

The second level of outcomes encompasses processes used within mathematics and knowledge about concepts that can be integrated into larger and more valuable pieces of information. This level is made up of computational techniques and algorithms, properties of numbers, mathematical principles, and related ideas which link several concepts into bigger mathematical ideas.

The formula $x = \frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$ is a *computational algorithm* for roots of $Ax^2 + Bx + C = 0$;

$$\begin{array}{r} 100 - 2 \\ \underline{50 - 1} \\ 150 - 3 = 147 \end{array}$$

is a *computational technique* for mentally summing

$$\begin{array}{r} 98 \\ \underline{+\,49} \end{array}$$

; the Greatest Common Factor (GCF) of two numbers consists of the common prime factors of the numbers, including the lesser exponent for common primes—this is an example of knowledge consisting of several related ideas:

$24 = 2^3 \cdot 3$ $36 = 2^2 \cdot 3^2$ GCF of 24 and 36 $= 2^2 \cdot 3 = 12$

This level of outcomes is more difficult to state, measure, and achieve than the first.

MATHEMATICS

The third level of outcomes consists of applications of the ideas, principles, techniques, and knowledge of the lower two levels. The applications may incorporate or develop new ideas, concepts, or techniques, or may simply integrate existing ones within an applied framework.

> *Joan has scored 75, 70, and 82 on three tests. What does she need to score on the fourth test to average 80 for all four exams?*
>
> total points by average : 75 + 70 + 82 + test 4
> 4 • 80 = 227 + test 4
> 320 = 227 + test 4
> 93 = test 4

Applications are chosen to reflect specific instances of common situations that general education should equip all learners to handle. Applications are also selected to provide learners opportunity to practice applying learning from other levels to *real world* examples. This experience nurtures the ability to transfer skills and knowledge acquired in specific instances to unique ones. Stating and measuring specific objectives for this level are more difficult than for the preceding two.

The fourth level of learning outcomes addresses problem solving. The goal of problem solving is for the learner to be able successfully to resolve problems for which he/she has not been specifically prepared (i.e., no similar example problem has first been introduced). Problem solving consists of specific thinking and organizing actions to help the solver interact with problem elements more effectively. It also consists of skills that help the solver focus upon relevant or promising problem aspects and marshal the full individual capabilities at his/her command. Most importantly, it consists of affective traits ranging from resourcefulness to willingness to stick with perplexing situations to confidence in one's own abilities.

Work backwards, ignore irrelevant information, make a table are thinking/organizing actions. *Works neatly, writes important problem information down, checks reasonability of results* are skills that help a learner apply his/her problem solving knowledge. Affective components/attitudes are *believes he/she can solve it, wants to solve it.*

Problem solving outcomes are the most difficult to state, measure, and to achieve. (Many standardized tests which aim at measuring problem solving are, in fact, measuring only a small portion of what it entails.) However, problem solving reflects the ultimate goal of education—to produce learners who can meet the unforeseeable demands placed upon them in the workplace and elsewhere after they leave formal education. It is the most important level of outcome to address.

Approach Dictated by Model

How school programs set about trying to define these four levels of instruction in their course of study and how teachers seek to achieve the outcomes associated with those goals are dependent upon the learning model embraced. Many districts and teachers favor a subskills model in which the primary emphasis is upon the acquisition of individual skills through direct instruction on and extended practice with each skill in isolation. Skills are perceived to be hierarchical with each subsequent set dependent upon the most fundamental. The expectation is that higher level skills to convey and receive meaning and solve problems will be mastered subsequently. By learning component skills, the student can learn the entire process. Most programs emphasizing "mastery learning" are based upon subskills assumptions (Kamil, 1982).

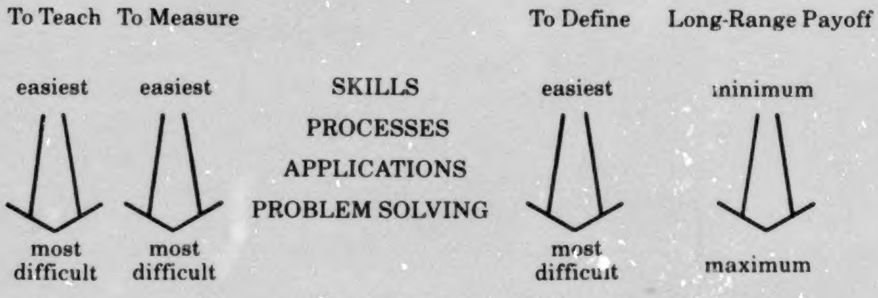
In the holistic model, a student learns through experiences that involve conveying meaning and solving problems. Individual skills are not taught in isolation. They are expected to be mastered in the process, without removing them from context. It is assumed that content of instruction is not separable into component skills for teaching or learning. Student ability to apply skills learned in isolation is considered qualitatively different from their ability to use skills in a whole-situation context (Kamil, 1982).

The third type of model is called a balanced model. Learning and instruction are initiated holistically and from a subskills perspective. The two processes are assumed to be mutually facilitating. The holistic prediction of meaning helps to make the identification of component parts (by use of the subskills) easier. At the same time, the identification of some of the component elements facilitates the prediction of meaning.

Few classrooms are likely to reflect completely one model or another. There are usually elements of each within specific classroom activities. However, it is important to note which model objectives one is trying to meet. For subskill models, learning is related to relatively small units which are then arranged to produce larger units. Holistic models specify larger units of learning which are more directly related. Balanced models lead to larger units of learning but also have some direct teaching toward specific small units.

In a subskills model, drill, practice, and repetition are usually stressed. Motivation and reinforcement are external factors imposed or supplied by the teacher. In holistic models, motivation and reinforcement are key elements to a student's growth and dictate the structure of learning activities. Drill or repetition out of context is minimal. Balanced models represent a combination of these factors.

LEARNING OUTCOMES



And therefore...

Of paramount importance to evaluating curriculum and teaching effectiveness is (a) agreement; (b) consistency; and (c) completeness in choice and implementation of a model for instruction. Since competency based education charts the progress of student learning over several grade levels, it is important for those in charge—teachers and administrators—to reach *agreement* on just what it is that learners are expected to achieve and the approach that is to be used. Shuttling a student from teacher to teacher or school to school with totally different expectations and approaches is not only confusing but also inefficient.

It is also important to reach an understanding about *consistency* of approach and outcomes. For example, it is frequently assumed the elementary school has responsibility for *basics,* meaning lower level learning outcomes and a strong subskills emphasis. With those in place, it is further assumed the secondary school can tackle higher level learning outcomes from more holistic approaches. A major problem with this tack is that it ignores the student. Having acquired learning habits and expectations about the teaching-learning activity that perceives mathematics as task by example, students are prepared neither cognitively nor affectively for an abrupt switch to problem solving and applications, requiring extensive thinking, perseverance, and self-initiative.

Without strong follow-through, mathematics instruction can easily sink to the lowest common denominator to assuage student anxiety and teacher frustration. Higher levels of learning outcomes may never be targeted or pursued for some students *by anyone.* The culprit is BASICS first—applications later. The effective program will strive to achieve all levels of outcomes throughout a student's experiences. And this commitment will be reflected in assessment and grading practices—not just paper goals, lip service, and incidental instruction.

Research and the Teaching/Learning Process

What is the role of drill in achieving competencies?

One of the major concerns of many persons who have watched the mathematics curriculum react to pressures for more accountability and assessment of instruction has been the extent to which computational fluency is stressed and how it is achieved. Research studies point to some interesting reactions to this pressure. A survey of teachers (Denmark and Kepner, 1980) indicated that just over half of those responding believe that basic skills mastery should *precede* development of concepts and applications. Yet research studies indicate that drill should follow meaningful instruction (Weaver and Suydam, 1972).

Drill, a much used technique to assure computational skill proficiency, has a short-term payoff: students can pass immediate tests with higher scores than those taught with meaningful instruction. However, those taught with meaningful methods will score higher on tests of transfer and retention (Weaver and Suydam, 1972). Moreover, 100 percent mastery by drill has proved to be an unreachable goal even by such proponents as Guy Wilson (1930).

How important are manipulatives to developing understanding?

Much has been said about the need to use manipulatives and to proceed from physical materials to abstract representations in developing understanding. Research generally supports the use of physical materials at all levels. However, it also points up the need to have students coordinate their knowledge of physical models with the algorithms or techniques those models are illustrating (Resnick, 1981). Otherwise, students can learn the two as separate procedures with no direct connections.

What does research tell us about student involvement in problem solving?

Research indicates the need to have learners become active in their approach to a problem (Bloom and Broder, 1950). Rather than copying someone else's rate procedures, they must generate their own plan of action. This requires that problem solving be viewed as a two-stage process. First, students must become more actively involved in thinking about the concepts of the problem and what they bring, in the form of thinking, to interact with problem elements. Secondly, students need to possess specific strategies such as *work backwards, work through a similar and simpler problem* which they can apply to problem situations. These strategies equip them with specific actions they can apply to make a problem clearer, simpler, smaller, or more manageable.

MATHEMATICS

How do we convey the intent of instructional outcomes?

> "We have found that precisely stated behavioral objectives are not an effective means of communicating with students, teachers, and parents unless the objectives are accompanied by sample test items. In many cases, sample tests are more effective in communicating objectives than lists of behavioral objectives" (Taylor, 1982).

Critical to the accomplishment of goals is a clear understanding of what those goals entail. Objectives are subject to interpretation and frequently mean different things to different people. Sample items that indicate the degree of difficulty and level of learning implied by an objective are one means of improving understanding of the intent of that objective.

How important in achieving outcomes is time and the way it is used?

Time-on-task has always been considered one of the most important criteria for teaching and learning effectiveness. In a study of seventh and eighth grade teachers, researchers found that more effective teachers devoted half of each period to combined lecture, demonstration, and discussion in contrast to less effective teachers who used a fourth of each period for these activities and half of the period for individual seatwork (Evertson, Emmer, and Brophy, 1980). In the same study, effective teachers asked more process questions (calling for explanations) and more product questions (calling for short answers) than less effective teachers. Level of student involvement was also found to be directly dependent upon the length of wait time—the time interval given for a response (Rowe, 1978). In the average elementary school classroom, this time was *one second* before a question was redirected, restated, or answered. By a simple increase in this time, the character of the classroom was changed to more interactive participation and detailed discussion by learners at every level of achievement.

What teaching behaviors characterize effective instruction?

Of fundamental importance to the tone established in the classroom is the attitude the teacher takes toward student involvement. Effective junior high mathematics teachers were more encouraging and receptive to student input than less effective colleagues in a study by Evertson, Emmer and Brophy (1980). Another study indicated the higher the number of student-initiated content questions and comments, the higher the student achievement in mathematics (Evertson, et al.).

In particular, good teachers strive to attain clarity in their instruction through specific behaviors (Bush, et al., 1977):

1. taking time when explaining
2. stressing difficult points
3. explaining new words
4. demonstrating how to do something
5. working difficult problems on the board
6. giving students an example and letting them try to do it

The following behaviors are ones which students indicate clear teachers display and unclear teachers do not exhibit (Cruickshank, et al., 1976):

1. giving students individual help
2. explaining something and then allowing students to think about it
3. repeating questions and explanations if students do not understand
4. stressing difficult points
5. asking students before they begin a task if they know what they are supposed to do and how they are supposed to do it
6. taking time when explaining

What is the role of individualization in instruction?

One type of individualization encompasses self-paced instruction. Many researchers have questioned the effectiveness of having students participate in setting individual goals, work at individual rates, and play a part in evaluating their own progress. Common objections include that pacing is the only individualized feature, since students progress through the same materials, with the same set of goals. Other objections indicate that program emphasis tends to settle on lowest level outcomes, stressing testing until mastery permits students to go on to other low level outcomes at the expense of higher analytic and problem solving skills (NACOME Report, 1975). Schoen (1976) reviewed many such programs and concluded the extra expense of self-pacing and extra time and effort required of teachers were not balanced by the effectiveness of the programs. Evidence from research on child development indicates the quality and quantity of peer interactions are vitally important to a child's learning, and that through exchange of viewpoints, children develop their language and ability to think logically (Kamii, 1971; Mathematics Resource Project, 1978).

Another approach to individualizing recognizes individual attitudes, content preferences, and special brain processes under the term *learning styles.* Although research has yet to establish clear connections between learning styles and instruction, certain approaches can provide a variety of learning options to enhance the performance of students whose major impediment is their style of learning, rather than an inability to learn. Some differences that can be accommodated through instruction are:

1. tactile, aural, or visual processing of information
2. regular guidance from others or working independently
3. analytical ways of thinking or global ways of thinking
4. impulsive or reflective responses to learning stimuli
5. reasoning deductively or inductively through similarities
6. tolerance or intolerance for ambiguity

To meet some of these varying needs, we can provide open-ended problem solving experiences that foster independence, but which provide guidance in problem solving techniques. We can encourage variety in thinking approaches to problem situations, sharing the spontaneity of the impulsive thinker with the integrative response of the reflective student. And we should make use of a wide variety of materials which expose students to different and multiple representations of the same concept.

Other examples of individualizing supported by research include differentiated assignments in which students have some choice in the amount of practice work they do; grouping to capitalize upon peer similarities or differences in assisting students with cognitive or affective-related difficulties; a laboratory approach permitting grouping; varied tactile/concrete approaches; and opportunities for small group or individual discovery experiences.

THE LEARNER

Indirectly, we have alluded to the learner as being a unique element in competency-based education. The learner is unique in three ways—stage of mental development, learning modality preference, and stage of understanding with regard to a particular concept.

The Piagetian notion of stages of development necessary before learners are conceptually *ready* to understand certain ideas is well-known. Most materials take these stages into mind in their scope and sequence. However, there are aspects of this development of particular concern to how mathematics is presented.

For primary students K-2, there seems to be a common reluctance to expose this age group to situations requiring any degree of *mathematical type* thinking. In this preoperative stage, students are indeed limited in their ability to hold more than one idea or variable in mind at a time. And they are not ready to consider their own thinking processes formally—unable, generally, to monitor their idea development or examine it for inconsistencies or illogic (Stevenson, 1975). However, primary students have marvelous capabilities to entertain and discuss mathematical ideas in practical, informal, and nonwritten ways. Studies have shown that first graders possess enormous potential for tackling addition and subtraction *word problems* before having any formal addition or subtraction instruction. In the words of one teacher, "A remarkable discovery I've made is that my first graders are successful problem solvers! Although their mathematics background is still undeveloped, their logic, reasoning, and insight are astounding."

The role of the teacher in providing learning opportunities at a *higher level* is to be a guide. Manipulatives and pictorial representations are particularly crucial to a young child's ability to deal with concepts that he/she may not even be able yet to verbalize. The teacher should strive to provide different representations of the concept under consideration and encourage verbalization of thinking from those students who are ready for it. However, verbalization should not be expected of students who may understand and be able to work with the idea yet lack the language facility to express *why* or *how*. The teacher should regularly expose students to the oral use of mathematical terms (e.g. *seventh, as many as*) without being pedantic in expecting students to use the same precision of language (their working language will likely be a stronger thinking link than formal terminology).

Another crucial teaching role is for teachers to identify the perception modalities that students use best and to do some grouping to take advantage of similar needs and peer learning possibilities. Students learn best when they have the opportunity to interact with one another. As students move from the specific to the general, from the concrete to the representational and try to verbalize what they perceive, they are in fact abstracting ideas.

Interestingly, the notion of using manipulatives to develop carefully linked concepts is discarded too quickly with most students. As students move into the concrete operations stage, they are able to deal more effectively with distractions, multiple ideas, contradictions, and classifications. And they begin to exhibit many abstracting skills similar to adult types of thinking. By their own choice, they tend to avoid techniques they associate with a younger period. Yet, on selected topics, they need this very careful type of development despite their verbal resistance. Failure to provide this kind of activity or experience can encourage students to substitute rote, memory-dependent methods for acquiring and using mathematical ideas.

This point becomes particularly evident when attempting to correct errors in mathematical technique or processes being attempted by the student. Consider the following chain of incorrect reasoning.

$$\begin{array}{ccccc} & & & & \\ & & & & \\ & & & & \\ & 8 & 0 & 0 & 3 \\ - & 1 & 4 & 6 & 9 \\ \hline & & & & \end{array} \qquad \begin{array}{ccccc} & & & & \\ & & & & \\ & 7 & & & \\ & \cancel{8} & 0 & 0 & {}^{1}3 \\ - & 1 & 4 & 6 & 9 \\ \hline & & & & 4 \end{array} \qquad \begin{array}{ccccc} & & & & \\ & 6 & & & \\ & \cancel{7} & & & \\ & \cancel{8} & 0 & {}^{1}0 & {}^{1}3 \\ - & 1 & 4 & 6 & 9 \\ \hline & & & 4 & 4 \end{array} \qquad \begin{array}{ccccc} & 5 & & & \\ & \cancel{6} & & & \\ & \cancel{7} & & & \\ & \cancel{8} & {}^{1}0 & {}^{1}0 & {}^{1}3 \\ - & 1 & 4 & 6 & 9 \\ \hline & 4 & 6 & 4 & 4 \end{array}$$

The notion of *borrowing* has been acquired only on the mechanical level and is being applied consistently, but incorrectly. Renaming a unit from one place value as ten units in the next smaller position is a conceptual *missing link* that will frustrate remediation attempts until this understanding is established. A majority of student errors at upper elementary and junior high grades stem from the individual's failure to acquire a developmental understanding of the concepts being applied. Reteaching that merely substitutes in the student's mind one set of rote procedures labeled *correct* for another considered *wrong* will never permit the student to apply the procedure or ideas in any creative way.

Succinctly, effective instruction will recognize two tenets of sound preparation. Intuitively, at virtually all levels, students are capable of much deeper insights and understanding than is generally credited them, even though they may have difficulty formalizing this knowledge. Secondly, a developmental approach is advisable for nearly any mathematical topic at all grade levels. By moving from the concrete to the representational, by generalizing from specific cases, you accomplish two goals. For some learners, you are providing missing elements in their development of the ideas being drawn upon in the current instruction. For nearly all students, you are consolidating independently-acquired ideas into a larger mathematical structure that will enhance long-term retention and application.

INTERVENTION IN MATHEMATICS

Intervention becomes necessary when learner feedback indicates the inappropriateness of the learning activity or setting for the individual student. Unlike the course of study and lesson plan which focus upon group outcomes, intervention is a tool which is applicable to the individual.

During the Lesson

There are various points at which alteration and individual tailoring of instruction can occur. The most effective is during the lesson itself. A well-structured lesson will be designed to cause students to think about the ideas under discussion, stimulate internalization of those concepts, and elicit feedback as to how well the new concepts or techniques are being understood. Learners will respond at various rates and with varying levels of understanding to this first opportunity for feedback. This simply gives the teacher the opportunity for extending and amplifying ideas under discussion. However, he/she has now noted those students who have not grasped the full concept at the first opportunity for feedback. Perhaps, a second problem is posed for class discussion with more direct observation by the teacher of those particular students. Again formal learner feedback is elicited (although the informal observation of individuals during the busy and relatively quiet task moments may be more important now).

The teacher is now at a decision point. How many learners understand the lesson ideas sufficiently well to go on to the independent work? If this number is large enough, those students can proceed with an assignment while additional small group or individual attention is given to the remaining students. In working with these students, the teacher will attempt to diagnose the source of their learning problems. If prerequisite skills and understandings are determined to be a major factor, then an intervention activity becomes necessary. Otherwise, small group teaching may take care of differences in learning rates or styles.

At the decision point above, it will sometimes be the case that most of the class is having unexpected difficulty. An intervention decision can be made at this point to halt the present learning activity, directly teach to the problem areas detected, and postpone the planned lesson until this prerequisite knowledge is in place.

After the Lesson

Immediate feedback is not always possible or reliable. Sometimes problem areas will not be detected until the next day or thereafter. However, lack of understanding will begin to show up in students' written or oral work. The keys here are evaluation and systematic review. Evaluation of students' work may disclose half-formed ideas which are causing problems. A common example occurs in multiple-digit subtraction. In examples A and B, the student is following the same procedures—subtracting the smaller digit from the larger. In deciding the intervention needed here, it is not enough simply to identify the error. It is also critical that the source of the error be detected so that *first* the student may understand why his/her method does *not* work. Then reteaching will be effective. After all, the student has chosen an incorrect method over the taught one for a reason—something about it is more appealing than the original method. (An appropriate intervention step above might be to review that subtraction means *taking away* the subtrahend amount from the given amount in the minuend. Showing how this is done with multibase blocks and relating these actions to the algorithm should produce the intended understanding.)

$$\text{A.}\quad \begin{array}{r} 472 \\ -151 \\ \hline 321 \end{array} \qquad\qquad \text{B.}\quad \begin{array}{r} 451 \\ -172 \\ \hline 321 \end{array}$$

Beginning each lesson with a review of one or two topics from recent days or weeks is advisable. It reinforces and refreshes those topics in students' minds. It reminds students that those things learned from day to day are interrelated and to be retained. And it also affords the teacher an additional opportunity to reteach, being particularly sensitive to how less successful students now handle these ideas. Prior to a day's lesson on finding volumes of rectangular solids by $V = 1 \times w \times h$, it might be advisable to review perimeter and area through formulas and figures which clarify the attribute being measured. This review sets the stage for determining the measure of yet another distinct attribute, volume.

End of Unit

Because of limitations on time and the content students can grasp during one learning session, instruction sometimes becomes segmented into smaller packages than the unit goals directing teaching efforts. How these various components fit together will not automatically become apparent to students without the direct efforts of the teacher. For example, single lessons within an algebra II unit might consist of:

factoring polynomials	$x^2 - 4 = (x - 2)(x + 2)$
graphing equations	$y = x^2 - 4$
solving quadratic equations in one variable	$x^2 - 4 = 0$

Students will not necessarily perceive the overall goal to be that of graphing equations and finding roots to polynomial equations; they may not see that the point where the graph of $y = x^2 - 4$ crosses the x-axis corresponds to the roots of $x^2 - 4 = 0$ which can be determined algebraically by factoring. Instruction aimed toward higher level integrative outcomes is needed to achieve these more comprehensive competencies. Students will have to draw upon their understanding of each of the individual topics and attempt to structure them into a more unified concept. Weaknesses in understanding any of the component ideas should become apparent during assessment and should become the target of an appropriate intervention activity.

After Assessment

The most commonly employed checkpoint of student progress is some kind of assessment. Care and effort goes into the construction, grading, and recording of results of these instruments. However, too little follow-up occurs in many instances. Test results provide formal feedback as to the level of understanding of *individual* students. Too frequently, a test seems to terminate a unit of instruction, regardless of individual results. Beyond going over the test and perhaps stressing areas of common strength or weakness, the press of covering more content pushes instruction ahead with little or no attention to those individual students who may have demonstrated a total lack of understanding of certain topics.

Practically, instruction must be time accountable. However, competency based education stresses results, not efforts. Regardless of the reasons for student failure to perform adequately on all areas of an assessment, some kind of intervention is called for when student performances should have been higher. While subsequent instruction may continue, efforts to assist individuals in overcoming these deficiencies should be ongoing. If enough students have similar problems, additional small group work may be advisable. For individuals, ancillary materials, tutoring, supplementary instruction, and extra-class time may be the answer.

End of Grade

Intervention decisions at the end of grade levels have the most serious consequences for students. Intervention occurring at this point is generally indicative of lack of success with earlier such actions on a smaller scale.

Adjustment of curriculum is a popular end of grade action. It can involve changing the track a student is in, adjusting upward or downward as needs dictate. It can entail a special program such as OWE/OWA at higher grades. It can influence course selection decisions as students are steered toward curricula more appropriate to their needs, interests, and capabilities.

At earlier levels, end of grade decisions can influence the amount of supplementary classroom instruction students will be scheduled to receive the next year such as assignment to a compensatory mathematics program. Or students may be scheduled for a special curriculum designed specifically to meet their competency needs such as a mathematics laboratory or independent study. The most drastic form intervention can take is retention.

A key feature of end of grade level actions is that they are program-oriented rather than specific-need focused. They should be considered with due deliberation only after prior shorter term solutions have been exhausted.

EXAMPLES OF INTERVENTION

In mathematics, there are several forms that short-term intervention can take. Since performance objectives and individual students are the target, a wide variety of approaches can be applied at the teacher's discretion.

The following intervention strategies are *not* meant to be prescriptive. They are but a few examples of the myriad of alternative strategies that could be used to support a district's intervention program.

The mathematics strategies do *not* represent the scope and sequence of a mathematics program, but rather illustrate that the instruction/ intervention process is provided K-12. Each district should discover, collect, and distribute to teachers additional strategies that will give sustenance for the total mathematics instructional program.

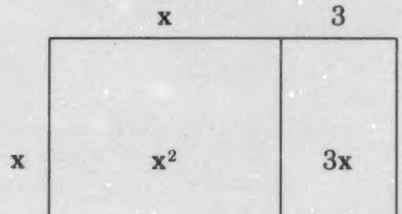
Alternate Approach to the Concept

Suppose the objective is to teach an elementary algebra class how to square a binomial, e.g. $(x+3)^2 = x^2 + 6x + 9$ One of the most persistent mistakes students make is squaring each term only: $(x+3)^2 = x^2 + 9$ (incorrect)

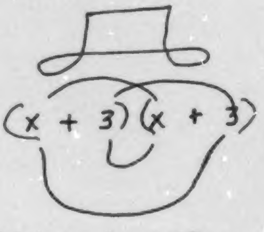
Research suggests that understanding is promoted when more than one way of viewing an idea is presented. Therefore, we might employ an axiomatic method:

$$\begin{aligned} (x+3)^2 &= (x+3) \bullet (x+3) && \text{by definition} \\ &= x \bullet (x+3) + 3 \bullet (x+3) && \text{distributive property} \\ &= x^2 + x \bullet 3 + 3 \bullet x + 9 && \text{distributive property} \\ &= x^2 + 6x + 9 && \text{collect like terms} \end{aligned}$$

We could introduce a geometric model, treating x + 3 as the side of a square and $(x+3)^2$ as its area.



$(x+3)^2 = x^2 + 6x + 9$



Or we could introduce "George," a mnemonic device to assist students' recall of the various products to be found.

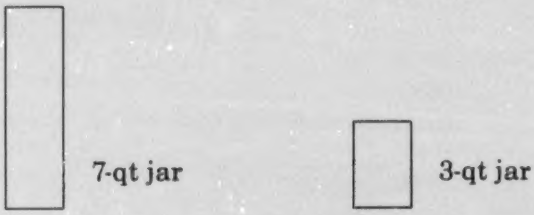
MATHEMATICS

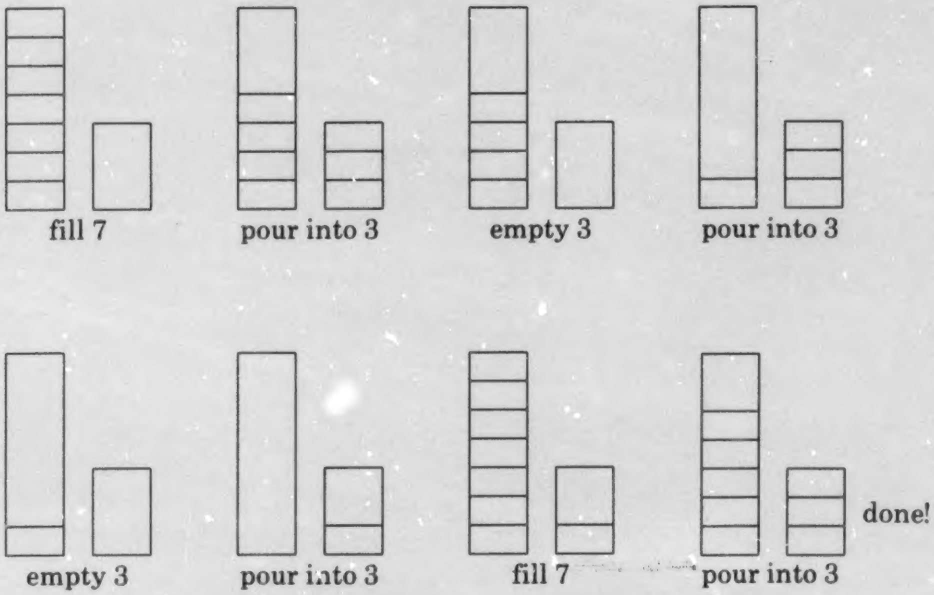
Use of Manipulatives

Suppose a student has been having particular difficulty just getting started in problem solving activities. He/she has trouble deciding upon any actions that can be taken with a problem. Introducing the use of manipulatives can give that student not only those important initiating actions, but also improve the student's attitude that he/she is doing something with the problem that may lead to a solution.

Example: Given a 7-quart and 3-quart jar, how could you return from the brook with 5 quarts of water?

Give the student cubes ◻ to represent quarts and have him/her draw the perimeter of a 7-quart and 3-quart container. Suggest that the student *fill* one container with blocks and use it to *fill* the other container and see where that leads.


7-qt jar
3-qt jar


fill 7
pour into 3
empty 3
pour into 3
empty 3
pour into 3
fill 7
pour into 3
done!

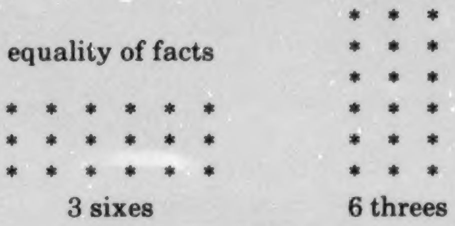
Drill Activities

For some outcomes, such as basic fact knowledge, competency is primarily a matter of drill to develop immediate recall. However, "drill alone will not change the thinking that a student is using; it will only tend to speed up the thinking that is already being used" (Rathmell, 1978). In helping a student having difficulty with such mastery, it is more productive to develop thinking strategies guided by organizing models before extensive drill occurs. The student then possesses a conceptual framework within which to encode these facts.

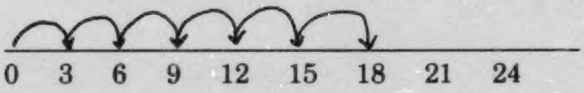
Fact Models

Compensation: 6 + 7 = ? since 6 + 6 = 12, 6 + 7 is 1 more than 12

Arrays: equality of facts



Number line:



skip counting for 6 × 3

Patterns: 2 × 9 = 18
3 × 9 = 27 digits in product always sum to nine;
4 × 9 = 36
5 × 9 = 45 ten's digit is one less than
6 × 9 = 54 the multiple of 9
7 × 9 = 63

Interactive Computer Programs

Computer programs can provide students computer assisted instruction for some types of mathematics outcomes. Good quality programs adjust the level of difficulty depending upon the student's responses and automatically keep records for the teacher to review at a later time. Some advantages to using a computer program for intervention activities are as follows: motivation, immediate reinforcement, identification of errors and explanation of correct procedures problem by problem, unlimited patience, and freeing of teacher time for other types of assistance.

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Concept Modules

From experience, some areas of difficulty or opportunities for enrichment can be anticipated in advance. Teaching insight suggests the need to have supplementary materials to satisfy individual needs. This form of intervention can be thought of as concept modules—single-topic and self-contained packages that students can work with independently and with little direction. These modules can be commercial, taking diverse forms from pamphlets to filmstrips or cassettes, or personally developed, such as teacher boxes or task cards.

Anxiety Reduction

A student's poor performance can be self-sustaining. Fueled by frustration, lack of achievement, and waning confidence, an individual situation can easily deteriorate into an "I don't care!" self-defense reaction. This may eventually lead to strong negative feelings about mathematics in general. Intervention needed here lies just as much in the affective domain as in the cognitive.

Problem solving activities by their very nature are apt to produce frustration and testing of attention spans. The anxiety attendant with this activity can be reduced by encouraging students to work in groups on some problem activities, particularly until some confidence is built.

Another approach to breaking a self-generating failure cycle is temporarily to suspend efforts to acquire the desired competency. Introduce, instead, a substitute method or transition approach. Consider a student having difficulty regrouping with the traditional addition algorithm when more than two-digit addends are involved. The following procedure may provide a new avenue for success and a feeling of accomplishment in having *a way* of meeting the task.

Partial sums are recorded for each column and then a horizontal line is drawn before summing the next column. The answer consists of the last digits in the columns.

4	6	7	5
+2	3	4	9
		1	4

4	6	7	5
+2	3	4	9
		1	4
	1	2	

4	6	7	5
+2	3	4	9
		1	4
	1	2	
1	0		

4	6	7	5
+2	3	4	9
		1	4
	1	2	
1	0		
7			

answer: 7024

Later, efforts can be resumed to establish skill with the more traditional algorithm.

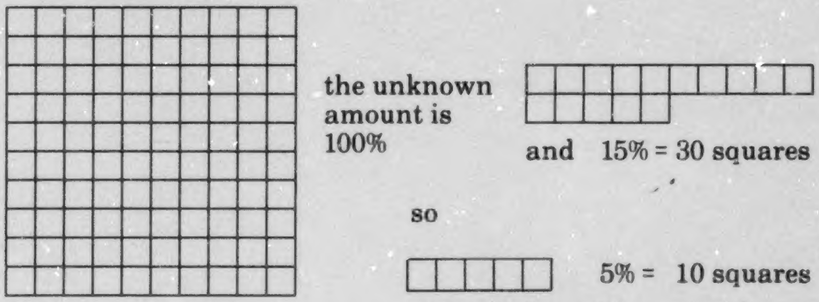
Filling in Gaps in Concept Development

Difficulty in working with a concept may have little to do with current instruction or ideas being presented. It may be attributable to lack of understanding of prerequisite ideas needed to apply the immediate topic. Identification of and intervention with the real problem is needed before effective instruction can continue.

> Student example: 15% of what number is 30? (The student is working this and all other percent problems, regardless of type, by multiplying the percent times the amount.)

$$15\% \times 30 = .15 \times 30 = \underline{\underline{4.5}} \quad \text{(a wrong answer)}$$

The student in all likelihood has no concept model upon which to conceptualize this problem. Therefore, an incorrect computational approach is substituted. With the appropriate model in mind, the student might think:



the unknown amount is 100%

and 15% = 30 squares

so

5% = 10 squares

that makes 10% = 20 squares

and 100% = 200 squares

Computationally, this requires division of the given information,

$$30 \div 15\% = 30 \div .15 = 200 \quad \text{OR the proportion} \quad \frac{15\%}{100\%} = \frac{30}{x}$$

can be solved for x.

Whereas either of the correct computations could be explained to the student, neither is likely to be effective in helping the student cope with a slightly changed problem until the earlier concept gap is filled.

Enrichment

Much of the focus of this section has been on learners who need intervention because of learning difficulties. However, in tailoring instruction to individual needs, some students will find the planned instructional activities inappropriate because they are already well past the learning involved. In such cases, the intervention action needs to find a means to challenge them. One easy approach is through differentiated assignments associated with the regularly planned activities. Minimally, this might consist of substituting more challenging problems from the text or supplementary sources. Independent project work is also an appropriate intervention action here. In either case, it will be important, on occasion, to have such students share with the class their work and understandings without it appearing they are receiving preferential treatment.

Another possibility is to give discovery or open-ended learning activities to the whole class and allowing capable students to seek their own level of most effective learning. An example from problem solving is the following:

> In social studies, we studied the effects of two-child versus three-child families upon population growth. Your task is to create a model of two-child family growth versus three-child family growth. Assume that two couples, aged 20, without children, are placed upon the island of Fertilia. These couples and all of their descendants are committed to having only two children per family. At the same time, two other couples, also aged 20 and without children, are placed upon the neighboring island of Greater Fertilia. They and their descendants agree to have exactly three children per family. Show how the population will grow on these two islands over a period of 160 years. Make whatever assumptions you need about when children are born, when people die, and so forth. But remember that people will not live for 160 years, and therefore, have to be accounted for in population totals.

Upon occasion, student capabilities may be so accelerated that provision within the classroom is not advisable. For such individuals, any of the following actions may be undertaken:

- assignment temporarily or permanently to advanced subjects or grades within the gifted/talented area
- assignment to a gifted/talented program
- early part-time enrollment in a nearby university
- assignment of the student to a mentor within or outside the district who has the background and perspective to guide this student's independent work

Intervention in mathematics is not a separate or new activity in effective instruction. It is an integral and ongoing part of sound teaching which adjusts group goals to meet individual needs.

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IV. INTERVENTION IN READING

READING AS A PROCESS

The effective reading program develops the reading skills of each student to the maximum level of the individual's intellect. Such a program involves and engages students in learning to read and reading to learn so that they become lifetime readers—individuals who read for pleasure and information throughout their lives. Effective reading programs generally emerge in school districts which have placed a high priority on teaching students to read. This priority is demonstrated through the commitment of district resources and personnel.

Reading is a complex process. Learning to read begins with readiness activities and progresses through the development of vocabulary, word attack skills, various levels of comprehension, and study skills. At any point during this process, a student may experience difficulty. It is at this time intervention is employed. When a student's learning is disrupted due to a lack of understanding or mastery of a skill or concept, action is taken immediately by the teacher to alleviate the deficiency. The intervention strategy employed is based on the needs of the individual student.

Although students may experience difficulty in learning to read for various reasons at various times, effective reading programs are designed to minimize difficulties, and the consequent need for intervention. It is to every district's, school's, and teacher's advantage to provide an effective reading program for each student so that the need for intervention does not become pervasive.

Elements of the Effective Reading Program

Effective reading programs have some specific elements in common. Such programs are based on:

- A districtwide, coordinated effort consciously directed toward specific goals which have been agreed upon by the entire school staff and the local board of education. The goals of the program are to provide students with meaningful and varied reading experiences, increased thinking and evaluative skills, enjoyment through reading, improved tastes and broadening interests in reading, the ability to utilize reading to satisfy individual purposes, and the continuous improvement and refinement of the reading skills.
- A carefully prepared course of study which provides direction and continuity to the program and which all teachers follow.
- Recognition that students' development in reading is closely associated with their development in other language arts.

- Providing for the individual reading needs of all students on the basis of adequate diagnosis.
- Making adequate adjustments to the widely different reading needs of the students through the use of varied instruction and flexible requirements.
- Providing intervention for those students who are not achieving desired levels of competency.
- Guiding reading activities at each level of advancement throughout the broad range of instruction within the school—basic instruction in reading, reading in the content field, literature, and recreational or free reading.
- Meeting the reading needs of students with extreme reading disability through special provisions.
- Frequent evaluation of the outcomes of the program and such revisions as will strengthen the weaknesses discovered.
- Establishing inservice training for teachers and administrators as a continuous, vital factor in the reading program.

Integration of the Language Arts

There are many variables to be considered when describing an effective reading program. First and foremost, perhaps, is the importance of looking at the broader picture of student acquisition of language arts skills. Language arts incorporates the communication processes of listening, speaking, reading, and writing. According to Lapp and Flood (1978) the development of the interrelated communication process is indispensable when the learner is acquiring or dispensing information. Therefore, it is vital to recognize and address the interrelatedness of the subject areas when any one of the subjects is being defined.

Wilson (1981) sees the nature of the relationship between reading and writing as a central issue in the study of literacy. In her view, the writer generates meaning which may be difficult to express clearly due to the limitations of language. The reader must interpret the language to arrive at the meaning. This description of the language process helps to clarify that reading and writing have a positive influence upon each other and that both processes develop as a natural extension of one's desire to communicate.

The implications for the early reader/writer apply also to the developing reader/writer. According to Aulls (1975) and Applebee (1977), reading and writing should not be separated in the curriculum because of the positive influence each has upon the other for students.

READING

Design of the Program

There are many different approaches to the teaching of reading. McNeil (1980) describes four different possibilities: developmental reading approach (often referred to as basal reading), technological approach, language experience approach, and individualized reading approach. Although each of the above has merit and deserves description, time and space do not permit a thorough review of each in this document. Since most schools in Ohio have elected to utilize a developmental reading approach, the following will emphasize the components of an effective developmental reading program. It is important to note that many of the same components found in an effective developmental reading program could also be found in effective programs based on any of the other three approaches.

McNeil (1980) states that developmental reading instruction involves teaching the student a number of reading skills that are common to many reading situations and to purposes such as reading for enjoyment, information, and guidance. He further defines the developmental reading approach by explaining how it stresses continuity (reiteration and review of what has been taught previously) and sequence (increasing breadth and depth of what has been taught) in the teaching of reading skills. Vocabulary and phonetic patterns are introduced systematically. They are controlled and presented in accordance with an assumption about the number of words that can be learned at a given time and the number of repetitions that are necessary. This sequential development is also utilized for comprehension and study skills in a developmental reading program.

Course of Study

1. Scope and Sequence

The development and *use* of a comprehensive reading course of study is instrumental to the implementation of an effective reading program. Such a course of study brings definition and continuity to a complex task. The development of the scope and sequence of the reading program must be carefully considered. (For information on developing a course of study, see *Process Model for Course of Study*, Ohio Department of Education.) It is impractical to require mastery of a skill at a particular grade level if the cognitive development of students at the level is not sufficient to allow success. Course of study committees in all subject areas need always to keep in mind the importance of helping students to succeed. It is this success which promotes student self-esteem and reinforces confidence, interest, and involvement in learning.

2. Appropriate Multilevel and Multimedia Learning Materials

Required content at any grade level, as outlined in the course of study, may not be included in the content of the adopted basic text. It is, therefore, necessary to provide supplemental materials for the instruction of any concept or skill required by the course of study but not addressed in the textbook. This is not to indicate that supplemental materials should be limited to those topics which have been omitted from the basic text. On the contrary, there should be a wide variety of multilevel and multimedia learning materials available to teachers and students. These supplemental materials are needed to reinforce learning and to address the range of learning styles exhibited by students.

3. Implementation of the Course of Study Through Lesson Plans

Lesson plans must be developed from the prescribed content of the course of study rather than from the content of the basic text. Frequently, concepts or skills introduced at a particular grade level in the basic text are not required at the same grade level in the course of study.

Frequent checkpoints are needed throughout the school year to insure that the prescribed content of the course of study is being followed. Two organizational techniques used by teachers and principals to insure that instruction is based on the course of study are described below:

- Asking teachers to highlight each new concept or skill in their lesson plan books when the skill or concept is first presented to students. (This technique enables teachers and principals to keep track of which concepts and skills have been introduced and which concepts and skills need to be taught during the remainder of the school year.)
- Providing teachers with a checklist of the pupil performance objectives for their grade level on predetermined dates. Teachers utilize the checklists by marking those concepts and skills which have been previously taught, revealing at a glance those concepts and skills that have yet to be introduced. Determining the dates, in advance, when the checklists are to be marked will bring consistency to the process and provide teachers and principals with an overview of skill development throughout the school year. (It may be necessary for teachers to have multiple copies of a checklist depending on whether or not grouping is employed and if so, the number of groups involved. The contention that more than one checklist will be needed if grouping is being utilized is based on the premise that each group is working independently of the others; consequently, the skills and content as outlined in the course of study will be introduced at different times depending on the needs of each group.)

READING

The development of thorough and consistent lesson plans by teachers stimulates, promotes, and enhances learning for students. Both long-range planning and daily planning are needed for effective instruction. A reliable guideline for effective planning may well include (1) objectives, (2) activities, (3) resources and materials, and (4) evaluation.

When planning lessons, teachers should be sure that media, games, and student-directed activities are incorporated. In this way, lessons will provide a variety of instructional techniques which correspond to a range of student learning styles and which enhance instruction and facilitate student motivation.

Characteristics of Effective Instruction

Prior to 1930, educators believed that learning was solely based on the ability and maturity of the student. However, research in the 1930s began to question the previous assumption (Gates, 1937). By the mid-1970s, studies were supporting the premise that teachers do make a difference in the learning situation. Two other significant conclusions from the 1970s research data are that a pattern of teaching practices is more likely to be related to learning than a single practice and that effective teaching patterns will differ by subject matter and by grade level (McDonald, 1976). For example, in looking at second grade reading, a pattern of instruction that allows teachers to be accessible to pupils for instruction, to work with them in small groups, and to use a variety of materials was most effective. In fifth grade reading, however, teacher practices that sustained interaction about ideas were most effective.

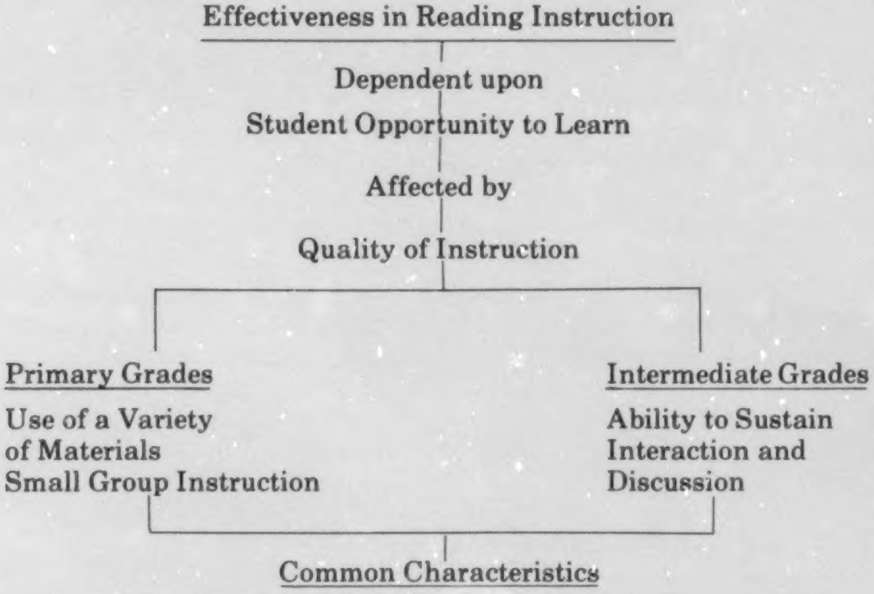
Berliner (1976) pointed out three student variables which are dependent on the teacher in a reading instructional setting, and which are clearly related to student achievement gains in reading. These variables are as follows:

- Academic engaged time—the time students interact with pertinent academic materials at a moderate difficulty level
- Content covered—instruction must be provided on the concepts the student is expected to master and must be on a level the student can understand.
- Provisions for direct instruction—in reading the major characteristics should be a structured reading program, the development of purposeful reading, systematic and meaningful development of reading skills, and the establishment of reading goals and objectives that relate to observable learner outcomes.

Blair (1975) and Rupley (1976) reported on several research investigations in the area of reading that found that teachers who employ ongoing diagnosis of students' reading development coupled with instruction adapted to the diagnostic findings had higher achieving students in reading.

The following chart* provides a visual format for understanding the instructional variables associated with effective teaching of reading. Apparent in this information is the fact that each of the variables is concerned primarily with instruction that is within the domain of direct teacher influence.

Instructional Variables Associated with Effective Teaching of Reading



Effectiveness in Reading Instruction

Dependent upon

Student Opportunity to Learn

Affected by

Quality of Instruction

Primary Grades

Use of a Variety
of Materials
Small Group Instruction

Intermediate Grades

Ability to Sustain
Interaction and
Discussion

Common Characteristics

- Diagnosis of student reading levels
- Placement of student in proper level for instruction
- Development of individual prescription for students
- Teacher knowledge and preparation time for a lesson
- Lesson presentation geared to student level
- Development of effective record-keeping system
- Proper use of materials for instruction
- Development of ongoing diagnostic techniques
- Maximum time for contact with students
- Balanced instructional and independent reading program
- Well established purposes for learning
- Opportunities for application of skills learned
- Balanced instructional and independent reading activities
- Systematic and meaningful development of reading skills

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*W. H. Rupley and T. R. Blair, *Characteristics of Effective Reading Instruction*, 1978: 173. Reprinted with permission of the Association for Supervision and Curriculum Development. Copyright © 1978 by the Association for Supervision and Curriculum Development. All rights reserved.

READING

Addressing Student Needs

1. Self-Concept

The effective reading program is based on the premise that a student must experience success to develop a positive self-concept and that a positive self-concept is needed to learn. For this reason, much attention is given to placing each and every student in a reading program where the student can succeed. In order to insure the best possible placement for each student, teachers should weigh several factors, including student learning style, attitude toward reading, and personal interests.

Poor readers have difficulty developing healthy self-concepts because schools and society place such a high premium on being able to read. Many poor readers question their value as human beings. Sensitive teachers can usually spot students with a low opinion of themselves. Here are suggestions* for helping students improve their self-concept:

- Reading with younger students—One of the best ways to increase students' self-esteem is to have them help younger students read. Low achievers can help younger students so long as they know just a bit more than the younger students.
- Proving your worth—All students need to prove their worth, but especially those with low self-concepts. Volunteer activities, in no way related to reading, can make students feel worthwhile and can have a positive effect upon reading achievement. For instance, students might be asked to make table decorations for a home for the elderly.
- Excellent at anything—Most students can do something well. If students do not seem to excel at something, it is probably because they have never been given a chance to do so. Students should have opportunities to excel in nonacademic areas.
- Choices make for success—If the only option given to students is to read a 300-page book, certain students will perform poorly. If there are many choices, ranging from reading several short articles to reading an entire book, more students will experience success with the assignment and thus feel good about themselves.

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*M. M. Manning and G. L. Manning. *Reading Instruction in the Middle School.* National Education Association, 1979. p. 34, p. 41. Reprinted with permission of the National Education Association of the United States.

2. Learning Styles

Each individual has a preferred learning style for every task undertaken. Competent adults have usually acquired several different learning styles despite the fact that one learning style is preferred. Students, however, may not have acquired an array of styles; consequently, learning experiences from which the student will derive the most benefit, satisfaction, and success will usually be based on the student's preferred style. The elements that should be taken into account when assessing learning styles* include the following:

Environmental—sound, light, temperature, and design

Emotional—motivation, persistence, responsibility, and structure

Sociological—peers, self, pair, team, adult, and varied

Physical—perceptual, intake, time, and mobility

Psychological—analytic or global, cerebral dominance, and impulsive or reflective

The following is an example of the type of questions that will assess a student's perception of personal learning style. Students are instructed to read each pair of statements and indicate which statement *most closely* describes themselves.

____ I appreciate it when the teacher tells me exactly what to do.
____ I prefer to design my own instructional program.

____ I prefer to work alone.
____ I prefer to work in a group.

____ I enjoy doing a number of things at one time.
____ I prefer doing things one at a time.

____ I am persistent and can complete assignments on my own.
____ I need someone to keep reminding me of deadlines so that I work consistently.

____ I like a bright study area.
____ I like a dim study area.

____ I prefer to work slowly.
____ I prefer working quickly.

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*Dunn/Dunn, TEACHING STUDENTS THROUGH THEIR INDIVIDUAL LEARNING STYLES, 1978, pg. 4. Reprinted with permission of Reston Publishing Co., a Prentice-Hall Co., 11480 Sunset Hills Road, Reston, VA 22090. RESTON PUBLISHING CO., INC.

Teachers have a responsibility to provide numerous experiences based on preferred learning styles so that each student will experience success. Teachers must also occasionally require students to experience learning through styles that are different from the ones they prefer. This will enable them to develop an array of styles which will enhance and extend their potential for learning. One specific learning style element which directly effects learning to read is the determination of whether a student is an auditory, visual, kinesthetic, or tactile learner. This determination will have direct bearing on the type of reading program in which the student will most likely experience success. For example, an auditory learner will more likely experience success in a reading program that stresses phonetic development whereas a visual learner in such a program will be more likely to experience failure.

3. Interest in Reading—Attitude

Analysis of a student's attitude toward reading tells a teacher if the student likes or dislikes to read. Such information can be of value to teachers as they design reading strategies for their classes and for individual students. It is important to identify those students who have developed a negative attitude toward reading. They often have had an unsuccessful reading experience. Once failure is encountered, it is difficult to convince students that reading is either fun or important. Teachers must make a special effort to provide positive experiences in reading for unmotivated students. The following are examples of questions that might be asked to determine students' attitudes toward reading.

I would rather read than watch television. Yes No
For my birthday I would like to receive a book. Yes No
I will read a good book quickly. Yes No
I am interested in joining a book club. Yes No
I have a favorite author. Yes No
I visit the library often. Yes No
I enjoy reading in my free time.

Knowing the interests of students can be an important tool to teachers as they teach students to read and help them learn to enjoy reading. Teachers can obtain such information by asking students to share what they do in their free time, observing the things that hold their interests, or collecting such information from an interest survey. An example of how an interest survey might be designed follows.

My favorite television shows are ____________________

____

In my spare time I like to ____________________

____

When I am 21 years old, I'd like to be ____________________

____

A hobby I would like to start in the future is ____________

____

My favorite holiday is ____________________

____

Underline the books and stories you like to read.

fables and myths
paperback books
biography
science fiction
animal stories
mystery
adventure
novels
autobiography
sports
western stories
short stories
humor
love and romance
comic books

Write down the kinds of books and stories you do not like to read. ____________________

____

4. Levels of Reading

The levels at which a student is reading should have special significance for the teacher. It is necessary to know the level of material the student can comprehend when working independently. Much of the student's schoolwork is done on an *independent basis*. All *instructional* work must be provided at a level where the student is challenged to learn and yet has adequate readiness for learning. *Frustration* is all that is achieved when the material to be learned is beyond the learner's readiness. For oral activities it is important to know the student's *capacity* level. Too often the false assumption is made that if material is read to the student, there will be understanding regardless of the level of complexity it represents.

The following explanation is adapted from Betts (1957).

READING

Independent level (two grades below the frustration level)

99% accuracy in word recognition
90% or above in comprehension

- The student can read easily without help or hesitation.
- The student understands very well the ideas presented and is free to enjoy the content.
- The student does not exhibit anxiety about the materials being read.
- By reading at the independent level, the student has opportunities to reinforce the skills that have been taught.
- Teachers, parents, and librarians should be concerned with this level in order to provide books or articles for reading independently.
- The student should do extensive recreational reading for enjoyment or for information. The student has control of experiences, vocabulary, construction and organization.

Instructional Level

95% accuracy in word recognition
75% or above in comprehension

- The student is challenged by the material, but it is not too difficult.
- The student is able to make successful progress with teacher guidance.
- The student should be able to reach with the help of the teacher, the same level of performance as the independent level.
- Strive to have the student handle the material independently at the end of the lesson.
- The student shows few, if any, signs of tension.

Frustration Level

90% or less in word recognition
50% or less in comprehension

- This level is too difficult for the student.
- The student's understanding of the ideas is limited.
- The student "bogs down" while reading a book.
- Signs of tension and faulty reading habits are evident.
    a. The student moves his lips and may even whisper.
    b. The student may point to words as he reads them.
    c. The student reads word-by-word or without expression.
    d. The student may make meaningless word substitutions, repeat words, insert words, or refuse to continue.

Capacity Level

At least 75% comprehension of material when it is read to the student.

- This is the highest level at which a student can satisfactorily understand materials that are read aloud.
- The student can accurately pronounce words heard.
- The student can give a report on what has been read.

These four levels offer the following guidelines for instruction: (1) The *independent* level is that level on which recreational reading should be done. (2) The *instructional* level is that level where help is needed and on which level the student should progress satisfactorily in a classroom or tutoring situation. (3) The *frustration* level is that level where learning is inhibited because of too rapid introduction of new words and concepts. (4) The *capacity* level is the top level of language understanding at the present time.

Classroom Management

1. Grouping

Many effective reading programs group students for instruction in reading and utilize proven grouping practices. Grouping students who are at similar developmental stages in reading can be an effective and efficient approach for meeting individual student needs. Such grouping enables teachers to design a reading program specifically for a small number of students who need similar instruction in concept and skill development. Grouping for reading can be established within the confines of the self-contained classroom setting, or it may be extended to include grade level grouping or cross grade level grouping, both of which further refine the grouping process.

2. Time on Task

Research continues to support the theory that learning is related to time on task. The implications of this research for reading are twofold. First, sufficient time must be allocated for instruction in reading skills. Second, sufficient time must be available for students to be engaged in the act of reading.

At the elementary level there is usually enough time to provide instruction in reading skills because these skills are taught in the reading group which meets for a designated period each day. However, a problem arises when it comes to having sufficient time in the school day for students to read independently. Too often, a student may read a paragraph or a page of a story orally while in a reading group, then read nothing more of consequence during the school day. It can be counterproductive to devote a large portion of scheduled reading group time to instruction in reading skills if students have no opportunity to apply these skills by reading. Students must have time to read during school hours. Teachers sometimes suggest that reading practice should go on at home and not during the school day. However, while student practice in reading at home can be very beneficial, there is no guarantee that the practice will occur and learning to read is too important to leave to chance.

3. Reading Skills Checklist

It is important for the teacher to maintain a record of each student's progress in mastering the skills needed for reading. Effective methods include keeping anecdotal records and making informal observations. Many teachers keep this information on a reading skills checklist for each student. Such a checklist consists of subject objectives as they are defined for each grade level in the district course of study. The following sample reading checklist illustrates how these objectives could be listed. The list is not meant to be all encompassing.

IMPLEMENTATION SERIES

READING

CLASS RECORD—GRADE 3

☐ not assessed

⧄ needs help

☒ acceptable outcome

School ______________________

Teacher ______________________

Competencies	NAMES							
THE PUPIL WILL DEMONSTRATE THE ABILITY TO USE WORD RECOGNITION TECHNIQUES.								
Divide new words into syllables and arrive at approximate pronunciations.								
Use root word, suffix and prefix as clues to pronunciation.								
THE PUPIL WILL DEMONSTRATE THE ABILITY TO PERCEIVE RELATIONSHIPS.								
Understand metaphors and similes.								
Identify the subject of a sentence.								
See similarities between events in stories and real life experiences.								
Perceive similarities not stated such as in unlike things (e.g., lemon/egg).								

READING

Competencies	NAMES							
THE PUPIL WILL DEMONSTRATE A KNOWLEDGE OF WORD MEANINGS.								
Recognize all common contractions.								
Understand meaning and use of common prefixes and suffixes.								
THE PUPIL WILL DEMONSTRATE COMPREHENSION SKILLS NECESSARY FOR SUCCESS IN READING.								
Comprehend elements of written material: main idea, specific detail, etc.								
Recognize how contrasting points of view influence the report of an incident.								
Determine details that support an interpretation about a character, plot, etc.								
THE PUPIL WILL DEMONSTRATE STUDY SKILLS NECESSARY FOR ACADEMIC SUCCESS.								
Use the index to locate information.								
Trace a route on a map.								
Interpret simple graphs.								

4. Sustained Silent Reading

Sustained Silent Reading (S.S.R.) is an activity that most teachers can implement with ease and which motivates students to read. Reading with regularity, as is required in an S.S.R. program, is vital to the mastery of reading skills. Sustained Silent Reading is a positive, free venture which can involve an entire school, a grade level, or a single class (*School and Community Handbook for Reading Improvement*, Ohio Department of Education, 1981).

How to Initiate S.S.R.

- Set aside 15 to 20 minutes for daily reading. It may be wise to begin with a 5 to 10 minute reading period in some classes.
- Everyone, including the teacher, reads a book of his or her choice.
- Teachers should have available a variety of books on different topics and at different levels for those students who forget to bring a book. Magazines are acceptable if approved by the teacher.
- No activity except reading is allowed during S.S.R. period. At the beginning, when the class is adjusting to the routine, the hard and fast rule must be established that nothing will occur during the S.S.R. period but *reading*. Some students will want to catch up on seatwork or homework. They may *not* do so during S.S.R. Some students will want to talk with other students, talk with the teacher, or wander around the room. They will find it very difficult to sit down and be quiet for a few minutes, but the teacher must insist that they do so. The teacher must enforce the rule that students who are not reading during S.S.R. may not disrupt classmates and must sit quietly in one spot during the entire period. Perhaps, with no other activity available, these students will choose to read during the next S.S.R. period.
- While no book report or project is required at the conclusion of a book, teachers should allow time for readers to share book recommendations, read meaningful passages, and/or see what others are reading.

Strengths of S.S.R. include the following:

Diagnostic observation:

- Levels of concentration
- Physical obstacles to reading (hyperactivity, etc.)
- Depth of involvement through spontaneous reactions, laughing, crying, etc.
- Subvocalization or vocalization problems
- Eye contact, superficial scanning, erratic movement of eye or hand
- Interest and reading level indicators

READING

Student Gains:

- Practice in silent reading—whether for information or pleasure—through a continuing interaction of mind with ideas
- Increased security with the printed word
- Greater ability to concentrate—a characteristic vital to both rate and comprehension
- Increased responsibility for choosing one's own reading material and for developing and enhancing personal reading tastes
- More library participation leads to useful practice in a variety of library skills and book care
- A wide variety of reading materials
- Good reading models within a setting where reading prevails
- Self-motivation as the reading act shifts from teacher-directed to self-directed
- Pleasure and relaxation in association with reading
- Increased vocabulary
- Improved comprehension skills

The following references may be helpful in initiating a Sustained Silent Reading program:

McCracken, R. & McCracken, M. *Reading is only the tiger's tail.* San Rafael, CA: Leswing Press, 1972.

Fader, D., et al. *The new hooked on books.* New York: Berkley Books, 1981.

Allington, R. Sustained approaches to reading and writing. *Language Arts,* September 1975, 813-815.

5. Reading to Students

Reading to children has long been recognized as a means of getting children interested in reading and writing. Research studies presently indicate that *consistently* reading to children has a positive effect on vocabulary and reading achievement.

One such study, conducted by Dorothy H. Cohen, New York University, New York, involved a special program of literature and accompanying activities which were introduced into the curriculum of second grade students. The teachers read a story every day of the school year from specially selected books. These stories were introduced in an order of increasing difficulty and were accompanied by follow-up activities designed to enhance comprehension (Cohen, 1968).

This study concluded that oral language and reading can be significantly improved by regular exposure to stories read aloud. At the same time, a trend toward reading failure already evident among the slower students was reversed. In addition, the study concluded that teachers must be familiar with student literature suitable to the age and stage of development of the students they are teaching.

Such reading improvement is not limited to students in the primary grades; students of all ages enjoy and benefit from having someone read to them. One Ohio high school instituted a program of reading to students during the study hall period. Students wishing to listen to the literature were asked to move to the front of the classroom, while those wishing to study were permitted to move to the rear. The teacher's initial selection was so popular that increasing numbers daily selected to listen. At the conclusion of the first selection, the students were permitted to choose a new story, by voting, from a list of literary classics. Study hall discipline problems were eliminated. Students began to select other readings by the same authors to read independently.

Students need to be read to *consistently*. Teachers may wish to consider organizing daily peer-reading sessions, volunteers reading to students, and/or teacher "story time." Separately, or in combination, these may become a most significant component of the total school reading effort.

There is a wealth of quality literature written for children. Teachers should make every effort to select the books and stories which are to be read to the class on the basis of the interest of the students and the quality of the materials. Librarians can recommend quality books to read and share. One reference that has up-to-date information on the titles of award winning books and where they can be found is given below:

Children's Books: Award and Prizes
The Children's Book Council, Inc.
67 Irving Place
New York, New York 10003

Awards given to outstanding children's literature include the following:

The John Newbery Medal—the most distinguished contribution to American literature for children.

The Caldecott Medal—the most distinguished American picture book.

The Edgar Allan Poe Award—the best juvenile mystery.

The Jane Addams Book Award—book which most effectively promotes dignity and equality of mankind, peace, and social justice.

International Board on Books for Young People (IBBY)—the best in children's literature from each country and literature which encourages world understanding.

Coretta Scott King Award—outstanding inspirational and educational contribution designed to promote better understanding and appreciation of the culture and contribution of all peoples to the American dream.

READING

Librarians can provide teachers with various journal reviews to guide book selection. Outstanding examples of these review lists are as follows:

School Library Journal (SLJ)—American Library Association
  "Best Books 19_" (Published in the December issue)
  "Notable Children's Books" (Announced in January)
  "Best Books for Young Adults" (Announced in January)
The Reading Teacher
  International Reading Association
  "Children's Choices for 19_" (Published in the October issue)

Other journals that review children's books are as follows:

The ALAN Review (NCTE)
The Booklist
The Bulletin of the Center for Children's Books
Childhood Education
The Horn Book Magazine
Instructor Magazine
Language Arts

6. Recreational Reading

All educators should promote recreational reading. It is not just the responsibility of reading teachers, language arts teachers, English teachers, and librarians. It is also the responsibility of every administrator and teacher. All educators should model good reading behavior, allow time for students to read, display books, and reward students for reading. Principals, physical education teachers, music teachers, teachers of fine and applied arts, and teachers of all other academic disciplines can promote recreational reading by letting students see them carrying or reading books and by encouraging students to discuss books they are reading, especially books which might be in the teacher's area of specialization.

There are many benefits to be derived from recreational reading: an increase in vocabulary; an improved attitude toward reading; the refinement of reading skills; and the realization that leisure time reading can provide pleasure, impart information, and broaden one's range of experience.

There is a great deal of competition for students' out-of-school hours. Television is a prime contender along with community clubs, church, and sports. Students who come from nonreading families find it particularly difficult to make time for recreational reading. Administrators and teachers must be mindful of this reality as they arrange student schedules and develop lesson plans.

Educators must dedicate themselves to helping students become "lifetime readers." A lifetime reader is one who has developed an interest in reading and reads for pleasure and information throughout life. Too often, students learn to be proficient readers but fail to develop an interest in reading. Generally, this interest is developed through recreational reading which must be promoted by educators and parents alike.

7. Environment

Students learn to read by reading. Therefore, the school environment where students spend many hours each day should be structured to promote reading. Classrooms and hallways can be filled with posters, signs, word cards, student writing, labels, magazines, newspapers, and books and still be aesthetically pleasing.

An effort should be made to create comfortable reading areas within classrooms and around the school. Students, like adults, often enjoy assuming a relaxed position when they are engaged in recreational reading.

Library

At the center of any instructional program, whether it be a primary, intermediate, or secondary program, must be the school library. This is the school storeroom of knowledge and adventure. It is the component of the instructional program that, if utilized properly, has the potential for helping students become *lifetime readers* and *lifetime learners.*

The development of lifetime readers and learners begins in kindergarten as the students develop the awareness that the library is a wondrous place where answers can be found to the many "why" questions that five-and six-year-olds are always asking. The students also discover that the center houses countless stories for them to listen to now and to read in the years to come.

The previously described positive attitude toward reading and learning may never be internalized by students if they do not have free access to a school library. The story is too often heard about the beautiful secondary library that high school students seldom use unless they must complete an assignment. A child's interest in learning and reading begins early and if neglected may never develop. Educators who assume that such interest occurs only after students have mastered basic skills will have a hard time helping many students, especially those who are slow in mastering the skills. Too often, by the time these students have mastered the basic skills, they have lost all interest in learning. How much more positive the end result when basic skills are reinforced and extended as kindergarten and primary students, as well as students at other levels, use the library freely to satisfy their curiosity and broaden their interests.

Teachers understand what is meant by the "teachable moment," which is that point in time when a student's interests and skills mesh with instruction so that learning occurs with ease. So, too. are there "learnable moments": those moments when a student is completely intrigued by a new idea or question which begs for an immediate answer. Such interest may be of short duration. Related learning may only occur if the student can get to the library to investigate the idea within a reasonable length of time and if there is someone present to provide assistance in case the needed information cannot be found. The student who must wait for several days to visit the library with the rest of the class is highly unlikely even to remember the question, let alone look up the information. The purpose for the class visit to the library is generally defined as a trip to either checkout books, hear a story, collect specific data for an assignment, or receive instruction in library skills. Class visitations to the center for these reasons are important; however, these practices should not exclude other types of library usage. If structured activity is the only experience students have in the library, the broader purpose of the facility may never be clear to them. Students must be free, with proper permission and at appropriate times, to utilize the library where constant supervision and knowledgeable assistance are provided. They must be encouraged and stimulated to react to the "learnable moment." Then both reading and learning will be supported and extended.

Usage of the library facility at any school, regardless of the grade levels it encompasses, will be impaired if knowledgeable assistance for students and teachers is not available throughout the school day. Consequently, such a center should be staffed full time by a competent, dedicated individual who enjoys working with students. The district that provides the proper facility but fails to provide staff is not realizing a fair return on its investment.

Evaluation

There are two major purposes for evaluating. First, evaluation of the total reading program is needed to ensure that the overall program goals and objectives for the district's reading program are being met as well as the subject objectives at each grade level. In *program evaluation*, consideration must be given to the teaching methods, the materials, the assessment instruments, and the students' ability to fulfill the objectives. What is learned from such an evaluation can lead to changes in objectives, methods, materials, and assessment instruments.

A second purpose for evaluating is to ascertain the progress of students in reading. *Student evaluation* may be accomplished through formal and informal testing as well as through daily assessment and observation. The purpose of student evaluation is not accomplished by formal testing once at the beginning of the school year and then again at the end of the school year or the start of the next school year.

General guidelines for evaluation include:

- Evaluation should be *continuous* rather than periodic.
- It should be a part of the instructional program, not apart from it.
- It should obtain evidence on the extent to which the stated objectives have been achieved.
- In obtaining this evidence, it should use both formal and informal methods.
- The data collected should be used for the improvement of program and procedures.
- Evaluation of a reading program should be carried on by a team that includes administrators, reading consultants, other specialists, teachers, students, and parents.
- Increasing emphasis should be placed on self-appraisal as the student grows older.

Parents

Parents can often assist their children in learning to read. Teachers may suggest that parents read to their children, listen to their children, or drill them on new vocabulary. Activities such as these are frequently suggested to the parents of children who are having difficulty learning to read.

The following are suggestions teachers can share with parents regarding how they can help their children enjoy reading.

Parent, You Can

- READ YOURSELF—Set an example for your child by regularly reading books, magazines, newspapers, recipes, instruction, and other literature.
- TRY TO KEEP A QUIET PLACE FOR FAMILY READING—Designate a quiet area of your home for reading. Provide appropriate lighting and comfortable seating.
- READ ALOUD TO YOUR CHILD EVERY DAY—Read to a young child everyday and to an older child as often as the child wishes.
- ENCOURAGE AN OLDER CHILD TO READ TO A YOUNGER CHILD—Both children engaged in this activity enhance their reading skills.
- TALK WITH YOUR CHILD ABOUT BOOKS—Ask about what your child is reading. Be a good listener.

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- BUY BOOKS, MAGAZINES, AND NEWSPAPERS FOR YOUR FAMILY TO ENJOY—Give and suggest books and magazines as gifts.
- BUY OR BUILD BOOK SHELVES FOR YOUR HOME—Have some shelves reserved especially for your child's own books.
- HANG A READING BULLETIN BOARD—Display vocabulary cards, posters, signs, and other written material. Change the display frequently.
- ENCOURAGE YOUR CHILD TO MAKE UP ORIGINAL STORIES AND TO DRAMATIZE STORIES—Write down stories which are told orally, type stories, create a stage, find props, and/or round up an audience.
- TUNE IN TO TV PROGRAMS YOU ENJOY TOGETHER—Discuss programs you view together, identify specific events, and evaluate program content.
- MAKE REGULAR FAMILY VISITS TO THE PUBLIC LIBRARY—Encourage children to be responsible for their own library books.

When Your Child Is Reading To You:

DO

Do be patient.
Do show interest.
Do provide a quiet spot.
Do tell the child any unknown word.
Do comment on the story.
Do give plenty of praise.
Do discuss the story.
Do ask questions about the story.
Do encourage the child to tell the story to other family members.
Do engage, if necessary, in quiet activities such as mending or ironing.
Do suggest that the child illustrate or dramatize the story.

DON'T

Don't interrupt the child who is reading.
Don't count the number of mistakes.
Don't let other children annoy the reader.
Don't carry on a conversation.
Don't read the paper.
Don't listen to the radio or TV.
Don't wash the dishes. (This activity can be noisy and distracting to the reader.)
Don't become impatient.
Don't *ridicule* the child.

READING

When Your Family Visits the Library:

- Borrow books to read aloud to your child when he or she is young.
- Help older children obtain their own library cards.
- Let your children choose their own books.
- Do not discontinue reading aloud to children even when they are old enough to have a library card and can read independently, for children learn much by listening.

(For additional activities that promote and reinforce reading and that can be used with children before they start school as well as throughout the primary grades, please refer to *Parents as Partners,* Ohio Department of Education, 1982.)

INTERVENTION IN READING

A society such as ours places a high priority on being able to read. Not being able to read is debilitating and embarrassing. A student may be failing to learn to read for many reasons, but irrespective of the cause, the end result of such failure is fear, anxiety, dislike of reading, and lowered self-esteem. Once these negative elements affect a student's thinking and attitude, the problem of teaching the student to read becomes even more complex. As the consequence of failure is weighed, it becomes evident that every possible strategy and technique must be employed to ensure that students experience daily success as they learn to read. When a student is not experiencing daily success, it is time for intervention.

Intervention is defined in the introduction of this document as instructional action taken when a planned learning activity is judged to be wholly or partially inappropriate for helping a student achieve a desired level of competency. This means that when a student is experiencing difficulty with an activity, an adjustment is made in that activity so that the student can progress and experience success. Schools and teachers should not wait until the student fails at the end of a unit, grading period, semester, or year before intervening. Intervention is immediate so that failure is reduced and the negative aspects of failing to learn to read do not become operational.

Intervention may be a matter of placement of a student in a higher or lower reading group. It may be a simple matter of changing a student's worksheet to a more appropriate reading level. Or, it may involve arranging for a volunteer or peer tutor for one-to-one assistance. The teacher must be prepared to arrange and rearrange assignments, placements, activities, and experiences for those students who need intervention.

It is possible that intervention strategies for some students will have to be developed from a broader perspective. For example, students may be identified who have all the skills for reading but who are not practicing reading enough to master the skills. The problem these students are experiencing may indeed be their own, but it is possible that the problem has been created by the school. The teacher, in conjunction with administrative personnel, needs to look at the total reading program both in the classroom and in the school to determine if the program, not the students, is at fault. For example, do students have time to read each day? Do students have adequate access to a sufficient number and variety of books on an appropriate reading level? Do students have a chance to talk with a librarian or a teacher who is knowledgeable about children's literature and/or who is familiar enough with the school library collection to match students' interests with available books? Do students have the opportunity to hear a wide variety of quality children's literature by numerous authors? Is equipment and software which fosters reading, such as tape players and recorded stories with accompanying books, available to students? Is there school-wide enthusiasm and promotion of reading so that students daily encounter interesting activities, displays, and discussion focusing on reading? All of the above components, as well as many others, are needed if students are to learn to read.

Intervention may be needed for gifted/talented students in reading, as well as for those who are having difficulty learning to read. Intervention is appropriate when *any student* is not achieving his or her desired level of competency. It is inappropriate to keep an advanced reader at the same level as students who are reading just on grade level. Instruction must be provided which allows all students to attain their maximum level of proficiency. This is accomplished by tailoring instruction to individual needs.

An effective reading program, with all of its ramifications, will, no doubt, have fewer students in need of intervention. This will be due to the fact that students are receiving instruction in reading at their level of competency so that they succeed daily. However, when a problem is encountered, intervention is provided immediately so that the difficulty is temporary and does not become a barrier to further learning.

The following intervention activities are *not* meant to be prescriptive. They are but a few examples of the myriad of alternative strategies that could be used to support a district's intervention program.

The intervention activities do *not* represent the scope and sequence of a reading program, but rather illustrate that the content is addressed K-12. Each district should discover, collect, and distribute to teachers additional strategies that will give sustenance for the total reading instructional program.

Examples of Intervention Activities
(Primary, Intermediate, Secondary)

Readiness For Beginning Reading

Reading readiness for beginning reading indicates that students are ready to begin formal instruction in reading after being prepared in the use and understanding of language through a wide variety of meaningful experiences. Teaching, planning, and methods that provide these experiences deal with such readiness components as visual perception, auditory acuity, visual memory, recall, sequence, directionality, gross motor and eye-hand coordination, language use, and self-concept.

READING

Activities which develop visual perception include:

Distinguishing color—Students may classify beads, fabrics, patches or blocks by color.

Distinguishing size—Students may contrast big and little by assembling a big object with a little one and telling about each.

Distinguishing detail—students may match picture and design cards which are alike and tell what they are.

Classification—Students may gather pairs of things that go together and put them on the bulletin board or display table.

Picture Reading—Students may tell the story from the pictures in a wordless book.

Learning about the letters of the alphabet—Students may learn the difference between letter names and letter sounds.

Learning through chart stories—Students may develop stories based on personal experiences that are put up on the room chart.

Learning through making individual books—Students may write a simple story which can be made into a book.

Learning through an environment of books—Students may browse through many books in a library center.

Learning through audiovisual association—Students may listen to a tape of a story while following the words in a book.

Activities which develop auditory discrimination include the following:

Intensity of sound—Students may listen to a record or the ringing of a bell and clap their hands when the sound is loud.

Pitch/tone of sound—Students may listen to notes played on a piano and indicate when the note is high and when it is low.

Duration of sound—Students may listen to a short sound and then a long prolonged sound and indicate which sound is short and which is long.

Rhythm—Students may match sound patterns by clapping hands or stepping.

Listening—Students may listen for particular words in a story or record: names of people, colors, feelings, places.

Activities which promote language development include the following:

Listening—Students may listen for particular words in a story or record: names of people, colors, feelings, places.

Speaking—Students may look at a picture and tell a story about it.

Writing—Students may write picture or rebus sentences and stories.

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Reading—Students may write rebus and chart stories and read their own words.

Thinking—Students may listen to a story which stops before the ending then tell different ways the story might end.

Activities which develop visual memory/recall include the following:

Students may listen to many songs and learn to sing them.

Students may tell the names of farm animals and give the sounds they make.

Students may write rebus stories about vacations.

Activities which develop sequencing skills include the following:

Students may make cartoon strip stories after having heard a story or song.

Students may arrange pictures on a chalk tray and make up a story with the beginning at the left and the ending at the right.

Activities which develop gross motor coordination include the following:

Body awareness—Students may engage in exercises designed to help them learn about and use different body parts, i.e., shoulders rotate, shrug, or dip.

Relationship to space—Students may put their arms in front of the body.

Time and tempo—Students may walk or run to rhythmic patterns beat on a drum.

Body control—Students may walk, skip, tiptoe on a taped line on the floor.

Awareness of the right and left sides—Students may hop to right, jump to left.

Activities which develop fine muscular coordination include the following:

Eye-Hand Coordination—Students may cut out pictures and forms.

Directionality—Students may place objects on a shelf moving from left to right; students may look at flash cards of objects in mixed patterns and reproduce them on paper.

Activities which develop self-concept include the following:

Students may develop self-understanding by looking in a mirror and making a self-portrait.

Students may dictate stories about themselves and illustrate them.

READING

Vocabulary

The development of proficient reading skills is dependent upon an ever expanding vocabulary.

The following are examples of intervention activities that promote vocabulary development.

Primary (Vocabulary)

Teacher selects an incomplete sentence, for example, "I want a __________," and engages the class in talking about things they want. The incomplete sentence is written on the chalkboard.

Students are asked to make a crayon drawing of something they want and to leave space at the bottom for writing. When the picture is finished, the students copy the words from the chalkboard and obtain help in completing the sentence.

The pages can be collected for a book. The book can be used with various groupings of children.

Words used to complete the sentence are made a part of the classroom environment for ready reference. Word ladders can be made by stringing cards together or by attaching them to a bulletin board.

Expand students' language power by having them develop books which utilize the skills of alphabetizing. The simplest ones are picture dictionaries. The challenge is to organize words according to the order of the alphabet.

Other types of word study booklets are suggested by these titles:

- Things That Are Square
- What I Saw Today
- Things That Make Sounds
- All Around Our Town
- Funny Things

Intermediate (Vocabulary)

Finding multiple meanings— Students take simple words such as *sign, check,* and *type* and write as many meanings for the words as they can. Allowing students to work with a buddy is a good system. After the students have listed multiple meanings for words, they can list other words with multiple meanings (Manning and Manning, 1979).

Secondary (Vocabulary)

Adjective brainstorming—Students think of all the adjectives that are related to certain nouns, such as, *movies, cars, video games,* or *homework.* Students work in pairs and need not defend their choices. Dictionaries should be available (Manning and Manning, 1979).

Word Attack Skills

The following are examples of intervention activities that develop phonetic analysis, structural analysis, and context clues.

1. Phonetic Analysis

The development of phonetic analysis skills provides students with an integrated way to recognize unknown words.

Primary (Phonetic Analysis)

Have students name all of the objects in a picture that begin with a given letter.

Label or match beginning sounds of pictured objects. Sort collection of small objects by initial sound.

Fold a large piece of paper into four lengthwise sections. Label each fold or shelf with a given letter. Students stock the shelves with objects cut from magazines or by making illustrations.

Intermediate (Phonetic Analysis)

The following generalizations may be explained together. Through comparison and contrast students are helped to understand the principle.

A vowel that is the last letter in a syllable *usually* has the long sound.

A vowel that is not the last letter in a syllable *usually* has the short sound.

Select key vocabulary, apply the syllabication principles, and have the students determine the vowel sounds.

In the use of sound as a word recognition technique, identifying the sound that the vowel represents may serve as a clue to pronunciation. Then students may recognize the word as a part of their speaking and/or listening vocabulary.

Mark the vowel sounds of the underlined letters. State whether a phonic generalization provides the clue.

__________ ra•tio
__________ bud•get
__________ pet•it jury
__________ le•gal
__________ pat•ent
__________ dem•o•crat•ic
__________ reg•is•tra•tion
__________ min•i•mum wages
__________ spec•u•la•tor
__________ con•ser•va•tion

Secondary (Phonetic Analysis)

Students should have a working knowledge of how to utilize pronunciation information found in the front of the dictionary. Students should become familiar with the following generalizations.

The information between the slash marks or parentheses shows the pronunciation. The symbols and their meanings are given at the beginning of the dictionary.

/'blāz/or ('blāz)

The hyphens show syllable divisions. These do not always correspond with the centered periods in the entry.

chla•mydo•spore
/klə-'mid- ə ˌspō(ə)r/

A high-set mark ' indicates primary accent, while a low-set mark ˌ indicates a secondary accent.

/'mī-krə-ˌfōn/

Additional pronunciation information is found in the front of the dictionary.

2. Structural Analysis

The development of structural analysis skills provides students with the ability to focus on structural units in words so that when these units are blended with the other word parts, recognition occurs rapidly and efficiently.

Primary (Structural Analysis)

Have students become involved kinesthetically by manipulating structural units. One example would be the rotating wheel. Inflectional endings could be printed around the circumference. Smaller circles with sight words could be fastened to the center of the larger circle and then rotated in order to determine appropriate auditory-visual matches.

Intermediate (Structural Analysis)

Teach students generalizations which will help them in decoding words.

Teacher	Students
• When adding a suffix that begins with a vowel to a base word ending in e, the e is usually dropped before the suffix is added.	• Look at the letter with which the following words end: decode eclipse expose • Add the suffix ed to those words.
• When adding a suffix that begins with a vowel to a base word that ends in a consonant-vowel-consonant pattern, the last consonant of the base word is usually doubled.	• Given these words: trip knot top refer • Add the suffix ed. • Add the suffix ing to these words: sap shop sled occur • What is similar about each word?

Teacher	Students
• When adding a suffix that begins with a vowel to a base word ending in a consonant but not in a consonant-vowel-consonant pattern, no change is made when the suffix is added.	• Circle the words that remain the same when either the suffix ed or ing is added. wreck slap hook slice stack
• When adding a suffix beginning with e to a base word ending in a consonant + y, usually, the y is changed to i before the suffix is added.	• Add the suffixes es, er, est to these words: funny happy sloppy gloomy

It is vital to be positive that students distinguish the number of sound units in each word when it is spoken. They must attend to the arrangement of letters in a word that signals the division of syllables. Also, they must know the letter combinations that make up the independent syllables and their sound values.

Have the students use nonsense words to test their mastery of the generalizations.

Add the suffix ing to jopgape ________________________

Add the suffix ed to teg ________________________

Add the suffix er to glost ________________________

Add the suffix est to topgy ________________________

Secondary (Structural Analysis)

An advanced use for students is the independent mastery of both affixes and roots. Attention must be drawn to "families" of roots and affixes and their meaningful combinations in the formations of new words.

PREFIXES:

anti — against

pro — in front of

pre — before

ROOTS:

matri — mother

patri — father

olig — few

bureau — specialization of functions

the, theo — God

hier — holy, sacred

mono — one

pluto — wealth

archy, arch — rule or government

cracy — form of government

crat — advocate of a theory of government

SUFFIXES:

ism — act or process

ist — of, relating to

Using the roots and affixes provided, as well as the context clues, determine the appropriate words to complete these sentences.

The ________________ of the church passed several new rules.

Grandfather is the ____________________ of the whole family.

Mr. Griffith, a(an) ______________, is against rule by women.

Rule by three, a triumvirate, is an example of a(an) __________.

3. Context Clues

The material which appears on either side of a specific word or phrase is described as the context. Clues are obtained from the print appearing around an unfamiliar word. Therefore, it is important that the reading material be manageable for students and within their background of experiences. In addition to finding context clues near the unknown word, context clues can often be found in the following:

- illustrations—Students use the illustrations provided by the author to discern the meaning of the unknown.
- mood or situation—The unknown word fits into the situation already established by the author.
- familiar language expression—Students use everyday language association to provide a clue for unknown words.

- charts, maps, tables, and diagrams—Students clarify the meaning of a word through the use of charts, maps, tables, and diagrams.
- experience—Students predict from their background of everyday experiences.
- synonym or definition—The author provides a synonym or definition adjacent to the new term.
- comparison or contrast—The word or phrase is like or opposite to another word.

Primary (Context Clues)

TASK	RESPONSE
Read to students from a variety of content selections including fantasy, science fiction, mystery, and poetry.	Stop at an appropriate place and determine if students continue by inserting a well-suited word, phrase, or sentence.
After first silently reading a 100-word selection containing context clues, have a student read it orally.	When the student encounters a word not recognized, wait approximately five seconds to provide an opportunity for an attempt at pronunciation. If there is no attempt, ask the student to continue reading to the appropriate stopping place. Then ask the student to reread the sentence or sentences to determine if the word can be recognized. Missing more than five words in a 100-word selection is a good indicator that the material was too difficult initially.
Analyze a student's substitution of a word that does not make sense in the content and which the student continues to read. *Example:* *That night they drove home in their old cat (car). And when they stopped at their front gate, what do you think they saw?*	Behavior of this type indicates that reading is viewed as calling words rather than getting meaning. This problem needs immediate correction. Ask the student to "Try that again," or say "I'm not sure I understand that." The student may hear the incongruency when what was incorrectly read is repeated. Try to get the student to focus on what is being said in a sentence sense.

TASK	RESPONSE
Note the substitutions that do not interfere with the meaning of the material.	This demonstrates the use of context analysis skills.

Intermediate (Context Clues)

Recognizing root words is one way to get the meaning of a word which has been formed by joining several parts. Parts can be removed as long as that which remains still is related in meaning to the root word.

Build an awareness of root words. Select the word which will fit into the phrase.

replant — to ________ the radium pellet
plantable — economical and ________ artificial flowers
implant — vegetables will be ________ in the garden
plantlike — green ________ need water
planted — the gardeners will ________ the shrubs
plants — the soil is ready and ________
transplant — this pot is too small, we must ________ this flower

Students must learn to identify root words in context as in the following paragraphs.

PARIS

city of light, city of charm

Paris is a song. It's a shrine, a spectacle, a city like no other city in all the world. Paris is the capital of France and a city of sights.

Paris is narrow streets of Montmartre where artists gather, the broad Place de l'Etoile where the Arc de Triomphe gleams. The Cathedral of Notre Dame, the Eiffel Tower. These are the things pictures are made of, these and countless bridges and boulevards, places, people parading through everyday life in ways that are purely Parisian.

In the twenty centuries since Julius Caesar reported a Gallic fishing village on the isle now called Île de la Cité in the Seine River, Paris has grown into a giant. Its metropolitan area holds a population of more than eight million.

A giant? Some would say a monster.

But below the tall new buildings, outside offices where people worry over housing and waste disposal, away from whirlpools of traffic, another Paris remains. It's the Paris that wins the heart and delights the eye.

Locate these words in the article and underline the sentences in which they are found:

countless purely parading fishing

From this group of additional vocabulary, write the words having the same root under the proper column.

recount impure discount parader fishery
counting pureness fishable fishy

countless	purely	parading	fishing

Secondary (Context Clues)

Students are directed to use the context to determine the appropriate dictionary meaning for five unfamiliar words. The words in question are to be words which have multiple meanings.

METHOD OF PASSING LAWS

Revenue Bills—All bills for raising revenue shall originate in the House of Representatives; but the Senate may propose or concur with amendments as on other bills.

How Bills Become Laws—Every bill which shall have passed the House of Representatives and the Senate shall, before it becomes law, be presented to the President of the United States; if the President approves, the bill will be signed, but if not, the bill will be returned, stating specific objections, to that house in which it shall have originated, who shall enter the objections at large on their journal and proceed to reconsider it. If after such reconsideration, two-thirds of that house shall agree to pass the bill, it shall be sent, together with the objections, to the other house, by which it shall likewise be reconsidered, and if approved by two-thirds of that house, it shall become a law. But in all such cases the votes of both houses shall be determined by yeas and nays, and the names of the persons voting for and against the bill shall be entered on the journal of each house respectively. If any bill shall not be returned by the President within ten days (Sundays excepted) after receiving it, the same shall be a law, in like manner just as though the President had signed it, unless the Congress by their adjournment prevents its return, in which case it shall not be a law.

READING

Students are to define briefly the underlined words in their own words so that the meaning fits the context.

bills ____________________

propose ____________________

house ____________________

pass ____________________

manner ____________________

Comprehension

The following are examples of intervention activities that develop literal, interpretive, and evaluative comprehension.

1. Literal Comprehension

Literal comprehension, according to Smith and Elliott (1979), centers in obtaining facts and details from prints. It is the primary way of obtaining information from reading material. Although much emphasis is placed on the development of literal comprehension at the elementary level, it is not unusual to find students at the middle school, junior high, or high school level who are still having difficulty in literal comprehension. They are unable to gain enough information from the print to be successful in the recall task required for classwork. All students need to be proficient in literal comprehension skills, and once competence is obtained, all memory techniques are applicable to what they are comprehending. The literal skills in which teachers should provide practice and expect student mastery include those listed below:

- following directions
- recognizing and recalling dates, places, names, facts, and other data
- recognizing and recalling the main idea
- recognizing and recalling the pattern or order of the ideas.

While the literal skills do not require some of the more complex thinking operations that are demanded in analytic and evaluative skills, they should not be thought of as always being *easy*. As more information and detail are added, even literal recognition and recall become quite difficult. Since the level of difficulty here is influenced by such variables as the length of the material and the amount of detail, the teacher can easily adjust the tasks so that every student is sufficiently challenged.

Primary (Literal Comprehension)

Teacher	Student
Emphasizes the names of people, places, things, dates, and major events during reading.	Indicates an awareness of what is to be recalled, which prompts the mind to remember it when encountered in the material.
Indicates to students when material has sequential information in it.	Perceives groups of items that are related in time.
Starts with a sequence of two events. When students can tell which came first, adds more events one at a time.	Obtains practice from such activities as following oral directions and recalling events from a story which has been read to them.
Cuts apart comics from the Sunday newspaper and pastes on cards. Numbers the backs of the cards to make the activity self-correcting. A variety of exercises can be developed with headlines and pictures.	Plac[illegible] comics in sequence.
Cuts appropriate experience stories into parts.	Orders phrases to make sentences, then sentences to convey story sequence.
Directs student's attention to sequencing clues used by authors.	Recognizes sequence words, numbered items, steps in a process, dates, and time order clues.

Intermediate (Literal Comprehension)

There is something almost instantly appealing about a brightly colored catalogue. Some large mail-order houses will provide a class set at no cost.* Ordinarily, even the most reluctant readers will happily accept a catalogue and will usually begin to turn through its pages with interest. The task for the students will be to search out the information from the print and select what they need to fulfill their assignment. Since the catalogue offers such a variety of topics, select those that are the most appealing and appropriate to each class.

- Prepare a wardrobe list for a particular season. Ask students to shop for it from the catalogue and report their purchases, page number, and purchase number.

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SHOPPING SPREE FOR SPRING! (FOR GIRLS)

Directions: Please select all the following items for a stylish spring wardrobe. Price is no object! List the page number and item number for each purchase.

	Catalogue Page	Catalogue Number
1. a red full-length washable coat	________	________
2. a white purse that has a coin compartment	________	________
3. a pair of white shoes that are on sale	________	________
4. a red-and-white washable scarf	________	________
5. a pair of pre-washed jeans	________	________
6. a pair of jeans with matching jacket	________	________
7. a cotton shirt that has polyester cuffs and collar	________	________
8. a sweatshirt that is reversible	________	________
9. a gold-filled bracelet with a synthetic stone	________	________
10. a pair of green flameproof shorty pajamas	________	________
11. a pink raincoat with a zip-out lining	________	________

SHOPPING SPREE FOR WINTER! (FOR BOYS)

Directions: Please select all the following items for a stylish winter wardrobe. Price is no object! List the page number and item number for each purchase.

	Catalogue Page	Catalogue Number
1. a gray wool sweater with a hood	________	________
2. black slacks with a sewn-in belt	________	________
3. a washable solid red necktie	________	________
4. a storm coat with a zip-out lining and six pockets	________	________
5. a plaid shirt that is 100 percent wool	________	________
6. a brown cardigan sweater that has extra buttons	________	________
7. a pair of pre-washed jeans that weighs less than two pounds	________	________
8. a brown leather wallet with picture compartments that is on sale	________	________
9. a pair of green flameproof pajamas	________	________

- In class discussion report the purchases and verify by page and item numbers.
- After the students do well with this level of searching for detail, you will want to increase the complexity of their literal-level work. You can do so by adding any of the following dimensions:
  a. Ask for more specific detail in the students' search. For example, add the dimensions of size, weight, fabric, and so on to the present details.
  b. Give fewer items in an exercise and ask the student to report them to you in a recall situation. You would, of course, do this only when they were working with subject-specific materials that were important for them to remember for success in the content area.

Secondary (Literal Comprehension)

Ask students to read content material, such as the following, to obtain factual information. Direct the learners' attention to the facts and details of what is being read so that the realization that literal information must be substantiated by explicit words or sentences is developed. Identify for students the specific cues necessary for discussing the facts and details.

WHO? WHAT? WHEN? WHERE?

> Introducing Computers
>
> The computer works very much the way you do when you solve a problem. First you plan the steps you will follow in working it out. The steps for the computer are called the program. Then you bring together the facts and figures, or data you will be using. That is the computer's input. Next you organize your data so that you can go through each step of the program. This is handled by the control unit of the computer. You do the actual calculations. The main part of the computer, the central processor, does this step. Sometimes you put aside information that you will need later. This section of the computer is known as the memory. At the end you come up with a solution. The computer, too, produces an answer called the output.

Draw from students what is known about computers. List the students' ideas on the chalkboard.

Ask students to list who, what, when, and where on their papers and then make tally marks under the appropriate question as they read.

Provide the key words which are used in the selection such as program, input, output, memory, and central processor. Direct students to read to locate additional information.

Give students factual questions to which they are to find specific answers such as the following:

1. Locate the word which means the steps of the computer's work.
2. What part of the computer does the actual calculation?
3. What is the computer's answer called?

2. Interpretive Comprehension

Interpretative comprehension requires the examination of relationships for the purpose of making inferences from the facts identified on the literal level. The learner does not find this answer on the printed page. This type of answer is not a content statement but rather results from thinking about the facts, relating them to both real and vicarious personal experience, and perceiving implied meaning.

This skill requires recall of facts, experience related to the topic, perception of relationships, recognition of implied meaning, and judgment making. The teachers should provide numerous practice activities and expect student mastery of such skills as:

- Relating supportive details
- Drawing conclusions
- Summarizing
- Inferring sequence
- Hypothesizing
- Making comparisons
- Categorizing
- Inferring cause and effect
- Recognizing character traits
- Interpreting figurative language

Primary (Interpretive Comprehension)

Teacher	Student
Presents pictures from various sources which indicate the beginnings of a possible happening. Asks students to predict likely consequences.	Predicts outcomes from pictures. Students self-check predictions where applicable by looking at the next picture or reading the story.
Discusses story titles by asking for predictions of what story will be about. Serves as a facilitator in getting as many ideas as possible surfaced. When discussion appears to be exhausted, quickly summarizes and has students read to find out what does happen.	Predicts outcomes from titles. Students' thinking is open and not restricted to verifying teacher-made prediction.
Asks questions which will guide students in arriving at generalizations or main ideas. If unexplained dilemmas are left unanswered, students are motivated to seek closure.	Predicts outcomes from story parts or situations.

Intermediate (Interpretive Comprehension)

The teacher develops the meaning of comparison and contrast by first having students select concrete objects and then applying the terms in discussion of words and experiences. In noting comparison, the teacher assists students in identifying like and corresponding features; in contrasting students are helped to cite unlike factors.

The teacher may prepare working examples of selections which explicitly provide both comparisons and contrasts. The direction to students is to cite first comparisons and then contrasts:

Nouns, Verbs, Adjectives

Comparisons: ____________ ____________

____________ ____________

____________ ____________

____________ ____________

Contrasts: ____________ ____________

____________ ____________

____________ ____________

____________ ____________

Students may also write paragraphs which describe major comparisons and contrasts.

A more advanced application is for the teacher to direct students to find two sources on the same topic and compare and contrast the provided facts.

Example:

"The Revolutionary War—The Canadian Viewpoint"
"Our Revolutionary War" by General George Washington

"The Battle of Gettysburg" by an Atlanta Journalist
"Gettysburg—My Home and My Battleground"

Secondary (Interpretive Comprehension)

This activity is designed to give students practice in an organized analytical process for predicting outcomes and solutions.*

- Select a piece of material that leaves the solution in doubt or the question raised unanswered. Select materials that are not highly controversial for the first attempt to work with this activity. After the students understand the process, it is well-suited for controversial issues, but to use such issues first would likely put excessive emphasis on the content rather than on the process.
- Ask the students to read the materials prior to the class.
- Briefly discuss the material with the students to determine that they understood the selection.
- When you are certain the material was understood, distribute the prediction chart which follows to the class.
- Work through the chart step by step with the students.
- Entertain all ideas presented, but prod the students to present some logical bases for their ideas. As the students have more practice with the process, you might even consider having them preface their ideas with their reasons. For example, "Because X happened, I believe Y is a good prediction here."
- Continue to use the chart for predicting outcomes and solutions either as a homework study director or as an in-class activity as material and student needs warrant.

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PREDICTION CHART

PROBLEM What don't I know that I want or need to know?		
A Common-Sense Solution	*An Unusual Solution*	*Another Solution*
Place check by final choice.	*Combination*	**TRIAL SOLUTION ONE**
	Combination	**TRIAL SOLUTION TWO**
REASONS FOR FINAL CHOICE 1. 2. 3. 4.		

3. Evaluative Comprehension

Evaluative comprehension calls for bringing together all the facts, details and generalizations for the purpose of evaluating the author's ideas.

Primary (Evaluative Comprehension)

Teacher	Student
Selects a controversial subject suitable to the interest level of the class and facilitates the debate and discussion of it.	Discussion: Should boys be welcomed as members of Camp Fire Girls and/or girls invited to join Cub Scouts?
Motivates students to gather more information to support their opinion.	
Has students compare written information.	Students read many books about families. Then discuss various standards of living, discipline, and other components of family life. Compares similar versions of stories in different books. Reads several books about the same person and compares presentations.
Presents accounts of the same incident as reported in various newspapers, magazines, on television, and on radio. Current events provide an excellent opportunity for critical reading.	Students are guided to distinguish between fact and opinion.

Intermediate (Evaluative Comprehension)

After silently reading the following excerpt or a similar one, students will be directed to note the source of the information. Have them give reasons why they feel that the article is accurate.

> In the coastal regions of North and South Carolina is found a plant which traps insects in its leaves and digests them. This carnivorous plant, Dionaea (DI oh NE uh), grows in bogs in which the soils lack available nitrogen. Thus, the plant's need for nitrogen is met by eating insects.
>
> The Dionaea grows about a foot high. It bears a cluster of small, white blossoms at the top of the flower stalk. The blossoms rise from a tuft of strangely shaped leaves. The leaves have two parts. The lower portion of the leaf is bladelike. The upper portion has two lobes hinged to a rib. Each lobe has three sensitive hairs on its surface. The edges of the lobes are fringed with sharp bristles.

> When an insect lands on one of the hairs, the two lobes of the leaf snap shut. The insect is trapped inside the leaf. Fluid secreted by special glands of the leaf digests the soft parts of the insect.
>
> When the plant has taken in the food, the leaf opens and is once again ready to snap shut on another victim. The leaf withers and dies when it has caught several insects.

Direct the students to underline all portions of the article that might sound unbelievable to them. Have them tell why they feel this way.

Discuss how the students might discover if such a plant exists.

Have the students compare and contrast this article to one that is constructed about an imaginary plant or animal. Have them note the similarities and differences in the manner in which the "facts" are presented.

Secondary (Evaluative Comprehension)

The glittering generality prompts the reader to react favorably. Words such as "freedom," "spacious," or "liberty" are examples of this type of word. Have the student complete sentences supplying words that would create a favorable reaction in the reader.

By adding an appropriate glittering generality, complete the following sentences so that the reader will have a favorable reaction.

- The ________ cottage was nestled in the woods.
- The crowd was obviously in support of ________.
- The governor made a speech concerning ________ in America.

Emotionally weighted words bias an audience. Different types of propaganda are often used to sway readers for or against someone or something. Transfer is needed for the reader to associate one idea with another, even though the two ideas are not actually connected.

Direct the students' attention to the use of transfer propaganda in advertisements. Have them note the vocabulary used as well as the visual transfer.

Using the media, locate visual examples of transfer propaganda. Regard such illustrations as a lovely girl selling a new car or a famous athlete using a particular after-shave lotion.

Locate key propaganda words and phrases such as "everyone uses" or "the brand of the in-crowd."

Study Skills

The following are examples of intervention activities for teaching students how to utilize learning tools, develop research, write reports, and read in the content areas.

1. Utilizing Learning Tools

Primary (Utilizing Learning Tools)

The table of contents page is an aid which will assist students in searching for information. The contents will indicate stories or sections which students may wish to read. Sufficient practice and reinforcement are necessary for the student to master this skill.

Provide students with a textbook with a table of contents. Ask the students to list the page numbers where some specific stories or sections begin by using the table of contents. Then ask them to turn to those stories/sections to verify that the stories/sections can be found on the pages which were previously noted.

Intermediate (Utilizing Learning Tools)

Provide students with a content area textbook with a table of contents. Ask students to practice finding the appropriate pages where the necessary information can be located.

(Table of Contents—Science)

UNIT III	ELECTRICITY AND MAGNETISM BECOME PARTNERS	
Chapter 1	Magnetism and Electricity	90
Chapter 2	The Electromagnet Goes to Work	96
Chapter 3	Electricity from Magnetism	103
Chapter 4	Strong Currents and Weak Currents	107
Chapter 5	The Induction Coil	111
Chapter 6	The Transformer	116
Glossary:	What Does it Mean?	120
UNIT IV	HEAT—THE ENERGY OF MOLECULES	
Chapter 1	The Nature of Heat	126
Chapter 2	Heat Causes Expansion	130
Chapter 3	Heat and Temperature	135
Chapter 4	How Do We Measure Temperature?	140
Chapter 5	How Is Heat Measured?	146
Chapter 6	The Transfer of Heat	151
Glossary:	What Does It Mean?	157
List of Experiments		159
Index		161

Ask students to use this portion of a table of contents to determine in which unit and chapter the answers to the following questions could be found:

	Units:	Chapters:
• How does an electric bell use an electromagnet?	________	________
• How would an induction coil be constructed?	________	________
• How does a person measure heat?	________	________

Secondary (Utilizing Learning Tools)

Students need to learn to summarize so that the relationship of facts can be seen more clearly. Organizing, whether or not in the form of an outline, is a type of summarizing. This type of summarizing, in which main ideas are covered, is a good way to review.

Practice is necessary if students are to learn to summarize rather than to copy everything that has been written by the author. Textbooks as well as magazines and newspapers provide a good source of information to be summarized.

Provide students with a form that will serve as a guide to the summarizing activity. Allow students to select an article of interest to use as a resource as the form is completed.

Magazine ______________________ Date ________
Article ______________________________________
Author ______________________________________
Subject of the article __________________________
____

List four important points (I, II, III, IV) gleaned from the article and add any important details (A, B, C) that would help clarify the topic.

I ____
  A ____
  B ____
  C ____
II ____
  A ____
  B ____
  C ____

III ____

  A ______________________________________

  B ______________________________________

  C ______________________________________

IV ____

  A ______________________________________

  B ______________________________________

  C ______________________________________

Once students have become confident using this prepared form for summarizing, allow them to arrange the information which they feel is important to their summary in their own words.

2. Reports and Research

Primary (Reports and Research)

The teacher, in cooperation with the librarian, plans a research assignment for each student, based, if possible, on an interest of each student. Even the youngest students can participate in this activity. Students are encouraged to complete their assignments individually but may work in pairs. Students are permitted to visit the library on their own, but preferably when the librarian is free to assist them. The librarian discusses the information with the student(s) who then returns to the classroom and presents an oral report to the class. It is important for the teacher and the librarian to understand that an early experience is intended to help students understand that the library is a source of information and that absolute accuracy of information shared in the oral report is not the objective.

Intermediate (Reports and Research)

The use of book reports at the intermediate level can either facilitate reading instruction or hinder the process. If handled improperly, required book reports may so frustrate and discourage students that all interest in reading is lost. Teachers must be cautious when developing a book report assignment to insure that students are given as much flexibility as possible in choosing what they will read and how they will report. Some suggestions for ways students might report include the following:

- Make a mobile that exemplifies the book.
- Construct something of paper, plaster of paris, cardboard, or wood that demonstrates a scene, place, or situation in the book.
- Make one or more hand-puppets to dramatize a scene from the story. (cloth, paper bag, or sock puppets)
- Make string or stick puppets of characters from the story, and then put on a puppet show with them.

- Dress dolls as characters from the story.
- List words each beginning with a different letter of the alphabet from A to Z that are connected with the story.
- Read to the class or a small group an exciting incident from the story, stopping where the suspense builds up.
- Write ten vocabulary words from the book on the chalkboard. See if the class can pronounce them and also define them.
- Draw a picture illustrating characters, an incident, or a place from the book.
- Plan a charade of the title of the book.
- Write a short resumé of the book. Leave the key words blank. Give the class clues to fill in the blanks.
- Have the characters from two biographies meet each other.
- Read a descriptive passage from the book—one in which the words give a feeling or emotion that the author is trying to make the reader feel as he reads the book.
- Make a movie of the book—on rollers—in a cardboard box.
- Read biographical material on the author. Read it to the class. Include other books that the author has written.
- Make up three to five riddles from which the class will guess the title of the book. (It will work better if you have a riddle for each word of the title.)
- Find words in the story that fit these categories: colors, foods, flowers, pets, proper names, places, etc.
- Make a picture dictionary of vocabulary words from the book. The words from the book would be arranged alphabetically and illustrated by a picture or a sentence.
- Make a sequence chart of the events of the book.
- Answer for the class the "WH" questions about the book: When, Where, What, Who and Why the story was written.
- Make a dot puzzle for the class. The story is told, the class connects the dots, and something from the story appears. (Example: a covered wagon.)
- Prepare a debate on something that is connected with the story. (Example: Should one earn money or have an allowance?)
- Pretend to interview the author. You would have to prepare the questions and have a classmate ask them of you—the author.
- Make a collection of things that are related to the story. Tell what each thing has to do with the story.
- Prepare a bulletin board of pictures and writing by three or more students who have read the same book.

- Read three or more books by the same author, or find students in the class who have read another book by your author. Discuss the books and try to find some thread that identifies this author. (E.B. White—animated animals.)
- Prepare a list of ten statements from the story. Put them on the board in "mixed-up" order. Have the class try to arrange them in sequence.
- Make a list of "feeling" words from the story. What feeling did the author want you to have? Do you get the same feeling from saying this word apart from the story?
- Write a letter to an author (c/o publisher) about a book you have read.
- Dramatize the story (give it as a play, TV program, or radio program).
- Make a display that correlates with the book. (Example: sea-shells, rocks, and fossils).
- Make a large map showing the action of your story (use this as you tell about the action).
- Rewrite the ending of the book to make it suit your idea of another possible conclusion to the story.

Secondary (Reports and Research)

Filmstrips, movies and pictures are meant to do more than entertain. The teacher needs to teach students to interpret what is seen. Students may need help as they begin to use the media to relate the facts presented to the content that is being learned in school.

Directed viewing, like directed reading, is necessary as the student begins to seek information through visual materials. The questions that the teacher asks will make the difference as students view these materials.

Have students write a story about a picture that would involve interpretive thinking. Have students include what might have happened before, after, or between pictures.

3. Reading in the Content Areas

Primary (Reading in the Content Areas)

(Content Area—Mathematics)

The teacher should select several story problems from the mathematics textbook. Students are asked in lieu of solving the problems mathematically to list the key words in each problem that would have to be understood in order to solve the problem. The teacher conducts a class discussion regarding the meanings and implications of the words listed. Students develop an understanding of how to interpret the key words when they are encountered in future problems.

Intermediate (Reading in the Content Areas)

(Content Area—Music)

There is specific vocabulary related to each content area. Without an understanding of these key words, students fail to comprehend important concepts.

Students are asked to group the following words into four categories. They are instructed to look for relationships among the words and identify the categories.

trumpet
saxophone
bassoon
baritone
English horn
sousaphone
French horn
oboe
viola
double bass
snare drum
piccolo
marimba
cornet
violin
cymbals
flute
cello
trombone
clarinet
timpani
harp

Secondary (Reading in the Content Areas)

(Content Area—Social Studies)

Give students two words or terms which have a valid relationship. Also, provide four words from which the students may select a word(s) that will join the original two to make the same valid relationship. Ask the students to describe what this relationship is.

Circle the word on the right which will form a valid relationship with the two terms on the left. On the blank line, name this relationship.

Tropic of Cancer
Tropic of Capricorn

Equador
equator
Greenwich
foreign

____

river
stream

butte
mesa
creek
erosion

____

Many of the examples used in this section were taken from *Teaching Early Reading* or *The Teaching Teen Reading Series*, Ohio Department of Education.

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V. INTERVENTION IN ENGLISH COMPOSITION

EFFECTIVE WRITING PROGRAMS

Effective Program Characteristics

The instructional leadership personnel of a local school district need to be aware of the components of effective writing programs for grades K-12. Thought needs to be given to the purposeful integration of the writing process elements into the total writing course of study.

An effective writing program has several characteristics:

1. It is a districtwide coordinated effort in which writing is used as a means of learning in all areas of the curriculum.

   The basic purpose of writing is to satisfy a personal need to express oneself. Students need help to develop a writing process that will allow them to express what they feel, to strengthen their patterns of thinking, and to complete transactions with others. To develop this writing process, there is a need for a districtwide coordinated effort that encompasses every grade level K-12 and involves every teacher in every subject area.

2. It provides a vast range of writing experiences in all areas of the curriculum.

   Writing may appear in as many forms as there are purposes for writing. Because students need to recognize the universality of writing requirements and uses, writing improvement can not be the total responsibility of the elementary teacher and/or the English teacher. All teachers, in all areas of the curriculum, are needed to foster as well as guide, the development of student writing skills. Teachers, through a variety of content writing experiences, can enhance the quality and quantity of student writing.

3. It is built on students' interests and based on all of their language experiences.

   The rate at which students develop the ability to write is affected by maturation and motivation. Teachers can provide a positive environment for the development of writing skills by using the students' language experiences as the foundation on which to build. Students can be further assisted by expanding their language experiences and increasing their vocabulary base. In addition to this language facility, teachers need to ascertain the students' interests and provide a variety of topics and assignments, both individual and group.

4. It promotes the development of student writing fluency without the fear of error. There is also the expectation that they will later master form and correctness.

ENGLISH COMPOSITION

Physical fluency in writing develops with increasing muscular control and practice. Writing fluency comes with positive stimulation, prewriting foundation, time, and encouragement to produce quantities of writings. Improved product quality comes during revision and editing after the ability to produce quantities of writings has been demonstrated.

5. It provides consistent time for practice.

   Students learn to write by writing. They need to write regularly, with the teacher writing with them as a model. Writings are not formally evaluated at the first-draft stage, but only at the time of final editing. Practice time includes time for prewriting, writing, responding, revising, and editing.

6. It develops and maintains a staff development program for all instructional staff.

   Consistent, meaningful staff development is necessary to focus districtwide efforts on writing. If writing improvement is truly a priority, adequate time will be allocated well in advance to promote long-term learning and foster staff commitment.

   Sound teaching techniques take time, effort and commitment to establish. Additional time, increased efforts and a strong belief/commitment will be necessary to change previously established teaching techniques. The instructional staff will need staff development which is based on current research and is meaningful for each participant. They will need adequate time between sessions to experiment and adapt the new techniques as well as peer/leader positive reinforcement.

7. It allows students to discover that writing is a method of learning about oneself, society, and the world.

   Students need to develop their capabilities to use the resources of writing in many forms and for many audiences. The process of writing is not fixed. It changes with individuals and with the tasks. Students should be encouraged to use writing to express their own feelings, to practice "survival" writing skills, and to record facts as they learn about the world around them.

The components of effective writing programs provide the basis for the development of a school district philosophy for the K-12 writing program. It is important for the district leadership to have the writing program instituted as a K-12 developmental process in which each teacher has responsibilities for instruction, assessment, and intervention.

> *Within this K-12 developmental process, intervention can take place immediately following initial instruction, when the immediate assessment form is teacher observation; regular informal assessments as a part of the teaching process; and the districtwide test*

Intervention can be provided both for students not reaching the appropriate point in the developmental process (as described through course of study performance objectives) and for students whose mastery of products/responses indicate that they are ready to move ahead toward mastery of the next developmental writing skill.

When one form of intervention has not proven to be effective, another form is required. Whether through observation, classroom tests or districtwide tests, the teacher needs to consistently assess the educational effects of the intervention that has been provided. If the original intervention approach has not proven to be successful, a modification of that approach or an alternative approach will be necessary. It is not enough to offer but one form of intervention. Different approaches are used until all students achieve the desired level of competence.

Both administrators and teachers play vital roles in developing the course of study, assuring that the performance objectives are taught, providing ongoing assessment, furnishing appropriate intervention, reassessing the student's progress, and evaluating the course of study performance objectives and the levels of expectation.

WRITING AS A PROCESS

Course of Study

A written philosophy and plan for district writing programs should be evident in the course of study. This will help all teachers to understand their role in the implementation of that particular program. The course of study provides for a consistent K-12 program that considers the total writing process.

Writing is a process that involves seven elements: prewriting, writing, responding, revising, editing (including developing skills with the conventions of writing), evaluating, and post-writing. Each element is to be a part of the K-12 course of study for writing programs. Each element is to be taught and practiced. Often these elements will need one or more of the following: additional practice time for mastery, additional instruction, and/or alternative teaching strategies for intervention. Instructional decisions regarding which of these instructional procedures to follow are based on various assessments, including teacher observation, classroom assessments, and districtwide tests.

As the course of study is developed, the instructional leaders must realize that each element of the writing process needs to be taught and practiced as a part of a developmental continuum. Specific skill instruction is to be integrated into the writing process at all levels of this continuum. These skills are specified by group/individual pupil performance objectives. However, a writing program that includes only skill development will not be effective.

ENGLISH COMPOSITION

When planning for instruction, teachers need to determine the students' language facility and then design activities and experiences which will promote and foster writing skills for all students. Pupil performance objectives provide a convenient way to organize instruction or to articulate goals. They also indicate the skill to be learned, the level of mastery expected, the condition under which instruction takes place, and the form of assessment to be used.

However, the more concretely objectives are stated, the more they dictate how to teach, not what to teach. The more specific the objectives, the more numerous they must be. *The manner in which an objective is stated is the way teachers will try to meet it.* While objectives that are too broad may hinder sound assessment and cloud the implementation process, numerous finite objectives may focus the teacher's attention on the skills themselves rather than on the meaningful use of the writing skills as a part of the total writing improvement process.

All courses of study should emphasize that students need to write frequently in all curriculum areas. Various modes, such as descriptive or narrative, need to be introduced and practiced as a part of the writing process as presented in each content area. Students will benefit from writing for a variety of audiences and purposes. Each course of study should also reflect an appropriate balance of creative writing and functional writing that can be consistently taught/reinforced through all content areas. Thus, the content teacher has a unique opportunity to give meaning to written assignments when the writings are based on the content being taught.

Instruction

Once the writing elements are in place as a part of the writing course of study's developmental continuum, and are also evidenced through the pupil performance objectives for specific writing skills, the instructional personnel are responsible for program implementation. Based on mastery of a skill that has been taught, and often on the mastery of the skill that precedes that skill on the continuum, instruction is provided for each element of the writing process. *It should be noted that intervention is instruction tailored to the student's needs and offered at the appropriate time.*

For districtwide writing improvement to be effective, students need to have the opportunity to practice various types of writing skills and techniques at each grade level and in each content area. This consistent opportunity should be reflected in the lesson plan which is the bridge between the pupil performance objectives of the course of study and the actual instruction.

Lesson planning needs to be done in three stages: long range, short range, and daily. Effective lesson plans reflect a balance of quiet and active participation. Lesson activities should range from the abstract to the concrete. Plans should include objectives, procedures, materials, activities and evaluation. (For a thorough description of the development of a course of study, use *Process Model for Course of Study* in the Implementation Series.)

Although instruction in writing focuses on all seven process elements throughout the K-12 years, these elements may be taught/reinforced in different ways at the various grade levels. Also, the amount of attention that should be given to each element may vary from student to student. For many students, the actual writing element, for example, may require the least amount of time in the total process, while the revision and editing elements may take large blocks of time and much instruction. In addition to great variance due to individual student differences, some writing assignments (journals, for example) may not require equal attention to be given to each of the seven elements.

Writing instruction does not pass from one element to the next while leaving the previous element behind. Instead, as a student gains skill within one element, that skill is incorporated in the next writing assignment. The breadth of the element can be enhanced as he or she progresses along the developmental continuum. For example, prewriting may begin through early exposure to language experience stories with the parent writing down the story as the preschooler dictates it. Next, he or she may independently use a crayon to "write" a story or story words. A later prewriting experience may include a class discussion followed by each student grouping, or categorizing, words important for his or her personal story. Later, as the student gains prewriting skill strength, prewriting may include initial outlining for story sequence and/or basic notetaking skills.

As the school's instructional personnel plan for the implementation of the writing course of study, they need to consider what practices make the teaching of the writing process effective. Some of the research findings are summarized below:

1. Grammar is the means by which the different components of our language can be put together in groups of sounds or written symbols so that ideas, feelings, and images can be communicated. In addition to the rules of grammar, there are usage rules which are acceptable in certain social settings. Grammar and usage therefore are means, not ends.

   The teacher needs to find out what problems the students have with making the language convey the appropriate message in writing and to work with students on solving these problems. Students need to understand the social implications of language and to develop flexibility in usage for different settings/audiences.

ENGLISH COMPOSITION

Teachers should encourage students to practice sentence development in their own writing. The students can develop competency in writing grammatically correct sentences by working with their own sentences. Therefore, students need to master grammar and usage skills when a need for it comes from the students' writings. A knowledge of the conventions of writing standard American English is particularly important during editing and revising. (Graves, 1978). However, an overemphasis on punctuation to the detriment of the ideas expressed may hinder the desire to write. (Porter, 1982).

The teaching of informal grammar or the mechanics of language, if separated from the process of writing, has little or no effect on the writing ability of students. (Hatfield, 1935; Holdzkom, et al. 1982). Grammar instruction not related directly to the writing process does not help students improve their writing. (Braddock, 1963). When excessive time is devoted to the study of grammar separate from the writing process, the effects may be negative. (Muller, 1967). Unfortunately, the knowledge of a rule does not necessarily lead to the employment of the rule. (Weaver, 1979).

Grammar is often combined with writing mechanics such as spelling and punctuation, yet grammar has nothing to do with those transcription skills. Grammar belongs to oral speech. If grammar is to change or improve, it must do so through further composition experience, and this can take place either orally or while writing. (Moffett, 1976).

2. Combining short oral and written sentences into longer ones can be effective in increasing the sentence-writing ability of students. (O'Hare, 1973; Cooper, 1975). Sentence-combining practice should begin in the elementary grades and continue through high school. It develops students' syntactic fluency by allowing them to make complex sentences out of simpler sentences.
3. Appropriate instruction along with frequent writing opportunities will improve the quality of the students' writing. (Arnold, 1964; Applebee, 1981). Neither written assignments nor time allocated for writing will be beneficial without the appropriate instruction and teacher/peer response.
4. The writing process that includes oral and written responses from peers and teachers produces positive results. (Diederich, 1974; Applebee, 1981). Teachers can help to motivate students to write. While students want to express themselves and communicate with others, they often feel that they have nothing important to say. Since this belief can promote carelessness in their writings, it is important that they be given opportunities to write on topics of interest and/or topics with which they are familiar.

5. Correction of student errors does less to improve the product than does praise of what has been well written. (Cooper, 1974). Students need to have confidence that they are able to express themselves on paper. Fear of writing often occurs when students are overly concerned about correctness. Teachers can, through positive reinforcement, eliminate this fear. When adults dwell on the correctness rather than on content, students tend to view writing as an imposed task rather than as a need for self-expression.
6. Writing programs that promote reading and that study written prose are effective in improving student writing. (Ebel, 1969). Some students need models upon which to pattern their writing experiences; others need to read many and varied types of writings.
7. An emphasis on prewriting activities leads to improved student writing. Such activities stimulate the writer's creative thought before the initial draft is begun. (Cooper, 1974; Odell, 1974). What a teacher does at the prewriting stage is likely to be even more important in fostering quality than that at the evaluation stage. (Walshe, 1979).
8. Students need models of good writing. Peer sharing, group editing, imitating prose models and teacher participation in the assignment will help to improve student writing. (Cooper, 1975). Students will benefit from seeing teachers and parents progressing through the writing process. When adults work on writing assignments with their students, the students are more likely to develop an appreciation of the value of writing.

No instructional improvement program can be effective without staff development. Research findings, new methods, and materials are available in such quantities today that staff members need assistance to be kept fully informed. Since many teachers have not received adequate preservice training in the teaching of writing, staff development is a vital component in the total writing improvement process.

Important points to consider when establishing a staff development program in writing are as follows:

- Participants should take part in the planning.
- Ongoing staff development efforts strengthen the long-term effect.
- Staff development should take place during regular school working hours.
- Programs should be based on research and be practical.
- Teaching demonstrations are necessary.

- Teachers need time to return to the classroom to practice what has been learned.
- Teachers paired into "coaching teams" to react to each other's teaching techniques will promote ongoing practice and mastery.
- Student work needs to be shared and enjoyed.
- Teachers from all grade levels and content areas need to be involved.
- Administrators and teachers need to work and learn together about the writing process.

Assessment

Schoolwide assessment is a key component in helping a school develop an effective writing program. Assessment provides a record of the student's overall academic growth as well as the student's proficiencies. Assessment data need to be used to plan for instruction and intervention, to evaluate the schoolwide and districtwide writing program, and to re-evaluate the appropriateness of the course of study and assessment instruments.

The assessment process involves examining a student's writing, both process and product, to discover strengths and weaknesses. The teacher needs to recognize and encourage strengths, locate the major causes of weaknesses, and use appropriate instruction/intervention strategies to replace weaknesses with newly developed strengths. It is not enough to locate needs without responding with positive intervention strategies.

Diagnostic observation is a necessary part of each teacher's role every day. Daily observations, carried on without distracting students from the writing tasks, will provide information for future lesson planning.

Both teachers and students can better assess strengths and weaknesses against some objective measure than by random subjective reactions. Checklists guide students while writing and serve as assessment criteria for students and teachers. Published checklists cover a wide range of student needs while classroom designed checklists are built on the development and needs of the class and the purposes of the teacher.

Informal assessment of student classroom process and products can be used to diagnose writing problems and suggest solutions. It can also be used to determine how closely a student's writing skills match the school district's pupil performance objectives. Thus, the teacher can develop intervention strategies appropriate for individual writers.

Informal assessments, while necessary, may present the student in a limited or subjective way. Using standard scales and forms may complete the teacher's view of the student writer and allow for the establishment of a sequential and appropriate instructional program.

A writing sample is a product to evaluate but it provides no direct information on the writer's process of composing. It does allow comparisons of products written under specified and controlled circumstances. Writing samples may be obtained in a variety of ways. One way gives students a topic that they can write in any mode such as the expressive mode. Or the students may select from several topics in a particular mode. Students are then directed to think more of content than of mechanics although they may use dictionaries and reference books and may revise. Samples are analyzed using a standard sample to identify the writer's strengths and weaknesses. Samples are studied by teachers to assist in the overall plan for writing instruction. (For a comparison of several methods, see Section II of *Competency Assessment and Testing* in the Implementation Series.)

Standardized objective tests may assist the teacher in identifying the proofreading and editing skills their students can use on written products. Because of the time lapse between test administration and the return of the test results, the test analysis data are not likely to effect the immediate instructional decisions.

Writing samples (direct) and standardized tests (indirect) assess some of the same performance factors while each also deals with some unique aspects of writing skills. While direct and indirect methods are useful in the total diagnostic process, neither should be used independently to present the total "picture" of the writer's progress.

Attitude surveys reveal how students view writing and themselves as writers, as well as what they recall of previous writing experiences and instruction. This information could assist the teacher in planning instruction and intervention strategies.

Assessment continues throughout the writing process. Teachers initially may learn about their students through observation and other informal assessments, but they may learn even more by studying the students' collection of writings and noting growth over a period of time.

ENGLISH COMPOSITION

Formative (ongoing) assessment is used daily in the classroom to monitor learning and to make instructional adjustments. Summative (final) assessment is done periodically to assess the overall instructional program. *It is the formative assessment that directs the teacher's decisions regarding the implementation of instruction or intervention strategies.* This ongoing assessment helps the teacher identify strengths and weaknesses; decide whether to teach, reteach or select an intervention strategy; identify whether the skill in question or the preceding skill is the weakness; and group for both instruction and intervention.

For additional writing assessment information, see *Competency Assessment and Testing* in the Implementation Series.

ALTERNATIVE APPROACHES FOR INTERVENTION

Developmental continuum

A strong writing curriculum is based on two kinds of objectives: (1) recurring objectives, which are repeated yearly; and (2) developmental objectives that define long-term growth. This spiral or developmental curriculum permits students to deal with the same concepts year after year but at different levels of sophistication.

Within one classroom, students may not only be learning different skills, which are represented as recurring objectives, but may also be dealing with those skills at various levels of sophistication. Options for individual growth are necessary as the students move along the developmental continuum. Intervention, in the form of alternative teaching strategies, is a vital component of the writing curriculum.

It is helpful for students to be made aware of the repetitive nature of the developmental continuum. *Thus, rather than viewing writing lessons as being "more of the same," they may become cognizant of their increased writing fluency, abilities and sophistication.* As objectives are mastered the writing and fluency will become apparent to the observant teacher. Students will benefit from being made aware of their ongoing improvement.

Learning styles

One alternative approach for intervention is to teach making educational allowances for learning style differences. Three major reasons for teaching to learning styles are listed below:

1. Increasing academic achievement
2. Improving student attitude
3. Reducing discipline problems

Each of these three major reasons for teaching to learning styles are items for consideration when planning/implementing a writing improvement program.

When designing intervention procedures for the writing program, the teacher needs to plan in three general categories for lesson adaptation:

1. Arrangement—physical facility as well as student groupings
2. Allowances—for student learning preferences/abilities as well as for teacher strengths and resources
3. Accommodations—special adaptations within the writing lesson to foster increased learning such as lesson alterations/restructurings

Students who consistently either do well or poorly on specific writing assignments may be responding to the ways in which the material is presented rather than to the writing itself. Teachers could instruct using their own learning/teaching style strength, then provide an alternative style independently or through a prepared instructional package. This alternative method could help underachieving students to succeed.

Teacher observation of student clues of environmental, social, and physical learning styles will provide direction regarding initial instruction and intervention. Regarding environmental factors, some students will write better in a quiet location while others prefer music. Work production may increase in a cool room for some students and prevent productivity for others. Carpets or pillows, rather than hard chairs, may foster writing productivity for some writers.

Sociological factors may play a major role in writing productivity. Some students do not write well alone; they produce and remember more when they work with peers. These students may benefit from working in pairs and on teams, especially for the prewriting, responding, revising and editing stages.

Students who need teacher contact may produce better writings if they are placed physically close to the teacher during the writing experience. These students will need frequent teacher reassurance especially during the response, revision, and editing stages.

Physical factors, such as the lack of ability to concentrate on what is being said, will hinder writing progress if the directions, prewriting activities, and responses are given orally. Students who do not attend to what they see and do not scrutinize carefully will have great difficulty in the revision and editing stages. Teachers may need to provide a peer partner to assist in this process.

ENGLISH COMPOSITION

Students who learn best in tactile, tactile-kinesthetic, or tactile-visual styles need real-life experiences with words during the prewriting stage. Trips, cooking experiences, and animal contact, for example, will provide the background and stimulation to produce writings that will be meaningful to the students.

No single writing method can reduce the risks of failure for all students. A sensible variety of instruction/intervention methods is the best way to assure that the students are given every possible opportunity to learn to write and to enjoy learning the writing process.

Classroom Management

Effective classroom management is critical to the success of any writing improvement program. The purpose of classroom management is to support instruction and to create an environment in which students can learn. How students spend their class time is greatly affected by the teacher's classroom management. One of the most important predictors of student achievement in the basic skills of reading, mathematics, and language is the teacher's classroom management (Brophy and Putnam, 1979).

Classroom management, whether in the self-contained or the content classrooms, is then a vital component of the writing program. Time for adequate practice and mastery must be provided along with the appropriate instruction. Individual, small group and large group instruction are a part of successful classroom management.

Key to effective classroom management is the selection of the appropriate and meaningful initial instruction and intervention. A vital part of this management process is the ongoing classroom observation and assessment which guides both instruction and intervention. Decisions regarding when and if appropriate alternative strategies are to be employed are consistently based on these classroom assessments.

When possible, the basic skills should be treated as a unified whole just as they are most often used in real-life situations. Greater coordination among departmental staff in basic skills instructional efforts and more attention to coordination within the self-contained classroom are essential. Thus, students should be given writing activities planned to involve them in the use of two or more basic skills in combination. Such activities will make both teachers and students more aware of how the various skills support one another. Greater coordination between writing instruction and content instruction is needed. At every level of instruction, process and content should be integrated.

Therefore, as a part of the total classroom management process for writing, teachers of all grade levels need to create some writing activities that combine reading, mathematics, oral communication, and writing in meaningful ways. Such activities will add variety and interest to the writing curriculum. Three common examples of writing and post-writing activities include the preparation of radio/television scripts that may be delivered to the class, the completion of mail-order forms that may be submitted, and the transcription of notes from a lecture. These assignments integrate basic skills yet foster the writing process.

For additional alternative strategies, see Section II Planning for Intervention.

INSTRUCTIONAL PROCESS ELEMENTS

Prewriting—Organization

Prewriting, the first element in the writing process, stimulates and enlarges thought and moves writers from thinking to writing. Initially students need planned prewriting experiences that help them to discover that they have something of value to say. Prewriting includes activities which help the writer discover subject, information, focus and point of view.

Prewriting is getting ready for the real writing. It is everything before a completed first draft. It will vary according to the writer's nature, personality, skill, topic, and the kind of writing to be accomplished. Prewriting must be long enough to sensitize the student to the purpose, subject, and audience and to how these three variables interface to form the total writing.

For young children, drawing is an important form of prewriting. The child may not know what he will write until the drawing is finished. As a child moves out of this stage, the drawing may come after writing as an illustration. Later the drawing may be only a mental picture.

Talk can be a form of prewriting. Students can participate in small group discussions, class discussions, informal debates, and interviews. Teachers can draw out ideas from the talking, shift the focus, and/or organize the ideas when writing begins.

Slides, wordless picture books, caption-less cartoons, pictures, field trips and interesting objects can stimulate talk that will become a part of the prewriting process. Talk is guided by teachers and other students, but it is not directed.

Students can talk in pairs, small, or large groups about similar experiences before writing. This talk may develop into a cooperative or a personal writing.

Group brainstorming is a prewriting technique to help the writers start thinking and recalling stored information. The recorded list reflects everyone's thinking without a value judgment.

ENGLISH COMPOSITION

Writing lists on a particular topic independently and as a group is a prewriting activity. The lists can then be examined and the items grouped or organized into categories.

Non-verbal strategies, such as listing, help students to get ideas down on paper. Clusters and webs around topics help students retrieve information and develop new ideas.

Questions can direct the writer's attention to items to include in the writing and can help the writer to retrieve or find the information needed to write. Continued practice can help writers to generalize such questions into those usable for their own planning.

Questions, using the traditional five W's (who, what, when, where, and why) can help to establish the framework for prewriting. Writing invitations and telegrams are two assignments that provide practice with the five W's.

Exposure to literature of different types helps the writer to plan for and model different types of writings. Students benefit also from hearing each other's writings read aloud. Studying another's writing is a form of prewriting. Literature can also be a stimulus for discovery. It can jog the memory and help to recall related experiences.

Intervention for some writing difficulties may include the provision of many and varied prewriting activities before the student is asked to write or move on to other elements of the writing process. Time spent at the prewriting stage may enhance each of those elements.

Prewriting activities can be fostered by the provision of the following components:

- stimulating writing environment
- ongoing motivation for writing
- writing class discussion time
- adequate student response time
- experiences with a variety of writing activities
- thought-provoking brainstorming opportunities
- meaningful vocabulary development time
- frequent creative dramatics experiences

Prewriting—Fluency

Teachers can improve the writing fluency of their students by motivating them to write daily and extensively in several content areas. Encourage students to write as many words as possible within a specific time without worrying about correctness. When some fluency has been developed, students can then begin to observe language conventions and write with a specific purpose.

Beginning and early writers need time to learn to develop fluency in working with papers and pencil and to transcribe sound into letters unconsciously. This process takes time and guided practice.

Freewriting is one way to develop the fluency of getting thoughts onto paper. It involves writing with no definite purpose and continuing until the purpose and a position becomes known to the writer. In this exercise writers do not revise or reword, but write in quantity without the fear of criticism or low grades.

Students doing freewritings write for five or ten minutes. Writers who cannot think of additional information to write merely repeat the last sentence until something else comes to mind. This process stimulates natural fluency. Products can be kept by the student so that they can see progress in ideas and quantity.

Freewriting can develop writer confidence and interest. The more students write, the better they write and the easier it is to begin and sustain a writing.

Journal keeping is another activity to promote writing fluency. The writer initially writes without going back to read, revise or edit it. A journal encourages talking to oneself about things outside oneself. This type of writing often helps to identify topics for further exploration and development.

The long range goal for teachers is the overall improvement of their students' writing ability. As an initial step, journal writing may first improve their writing fluency. Having enjoyed writing a journal, students may conclude that writing is a favorable experience. This feeling may help students to continue writing as they improve their writing ability.

Journals are read by the teacher only with the permission of the student. Often the teacher keeps and shares journal entries to encourage peer and student-teaching sharing of journal writings.

Fluency can begin with independent short-timed writing of word lists on a popular or thought-provoking topic. On the following day, the student can try, within the same time frame, to write more words on another pre-announced topic. This process can continue as the time frame is increased and as the student moves from writing words to phrases and phrases to sentences. Students can then develop fluency and also the confidence to begin writing immediately when the timing begins.

Developing fluency is a vital part of the total prewriting stage. At this stage, the emphasis is on quantity within a set topic, not on quality. Fluency is a necessary developmental stage before the writer progresses to the writing stage.

ENGLISH COMPOSITION

Fluency promoting activities can include the following:

- Production of timed writings where quantity, not correctness, is important.
- Completion of journals and learning logs (the student writes an explanation for a presentation, concept, or lesson).
- Listening to stories with the opportunity to write as much as is remembered.
- Dictation to another person who writes down what is said.
- Compilation of lists of objects in categories.
- Exposure to quantities of good, fluent writings.

Prewriting—Sense of Audience

Students are their own first audience. This aspect of writing is important in helping them to discover what they want to say before writing to a larger audience. Students should try to envision the audience before writing so that they can adjust the writing style and content with the audience in mind.

When writers have first developed the fluency to write and the ability to translate feeling and ideas onto paper, they are generally writing for themselves. Part of prewriting is to see the reader for whom they are writing. This concept is not an easy one to develop.

Competent writers must be able to write for different audiences and for different purposes. As the writers identify their roles, they must also identify the audience to whom the message is addressed. This mastery takes much time and teacher direction.

Writers need to think about and/or write down information regarding the audience such as personal qualities, relation to the subject, relation to the writer, and the relation to the form the writer will use. In addition, the writer may also need to know the description of the situation, its background, the reader's belief, and the desired outcome of the writing.

An individual or a group can practice writing for various audiences by providing descriptions of one occurrence or story for a variety of audiences. For example, writers could retell a fairytale for three different age level audiences such as preschool, fourth grade, and adults. Prewriting experiences could involve listing key words appropriate for the age level; considering sentence length and structure as well as story length and sequence complexity; and citing concrete and/or abstract examples for the plot development.

Additional activities to promote the sense of audience include the following:

- Write about one news event for different audiences.
- Write to persuade a person or group to do something unusual.
- Write letters for specific purposes.
- Write about content subjects for younger students.
- Write the same message for several different audiences.
- Rewrite stories by making changes that would interest different groups.
- Write a letter to a favorite book or television character.

Prewriting—Purpose

Students need to identify a specific purpose for each writing. The purpose can be the prime source of writing motivation. The purpose can help to determine the grammar and usage decisions made during revision and editing. While the purpose may be related to an identified intended audience, students may need additional assistance in defining the various purposes for writing. Prewriting practice time and instruction are needed to master writing that, for example, informs, explains, entertains, or persuades.

Students can use prewriting time to specify the exact purpose for the writing along with the intended audience to whom the message will be delivered. One prewriting experience might have the teacher describe one situation or location such as a small island. The writers can then be grouped independently, in pairs, or in small groups to list both positive and negative words or phrases that could be used to describe the situation in various ways for different purposes. For example:

Positive	Negative
romantic	marooned
tropical trees	insects
sea breezes	limited fresh water
secluded	blazing sun

Writers could then determine, or be assigned, various types of writings that would use either the positive or negative lists. For example:

Positive	Negative
• travel brochure— (persuade to visit)	• letter in a bottle— (persuade to rescue)
• bird-watching journal— (description of rare tropical bird)	• letter to parents— (persuade to remove writer from isolated camp)
	• article for magazine— (narration of amusing happenings)

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The mode of thought includes narration, description, persuasion, analysis of cause and effect, comparison/contrast, definition, and classification. Each mode needs to be practiced in a variety of ways so that the writer both recognizes and is comfortable in attempting each mode.

The concept of focus also needs to be taught. Students need to be able to limit the scope of the topic on which they are writing. Prewriting practice may include listing or brainstorming as many related words as possible on one topic, grouping or categorizing the words, and then focusing on one category of the topic. Teams of students may each be assigned to focus on one such category so that the whole topic is covered for a group writing project.

Activities to foster writing for a purpose include the following:

- Make a list of purposes for writing on a set topic.
- Identify the writers' purposes for writing.
- Write on one topic using various modes.
- Rewrite to focus on one purpose.
- Write on the same topic with various purposes in mind.
- Rewrite with a different purpose.
- Design activities for both creative and functional writing.

Writing

Writing involves the student's physical, emotional, and intellectual self. Therefore, as a student begins to write the teacher must adequately provide time, space, and guidance for the development of writing process skills.

One necessary guidance procedure is to both observe and diagnose how students are progressing during the writing stage. There are four points at which teachers can make observations and diagnoses: starting, writing, revising, and stopping.

Using this observation data, a teacher can diagnose when and how to provide the necessary intervention. Each step in the writing process presents different problems for writers. Their behavior indicates whether or not they feel confident and at what point they have difficulty. Teachers can observe:

- the ease/difficulty with which they begin writing
- the physical ease with which students use a pen or pencil
- the strength/weakness in writing to a particular form
- the need for further direction/clarification
- the need for peer/teacher reaction and encouragement

Intervention will be necessary when a teacher observes that a student needs reinforcement of certain writing skills or requires additional preparation to write. It may be necessary to return to the prewriting stage for further preparation.

Students should understand that revision and editing come after the first draft has been developed. This knowledge may remove some mental obstacles during writing. Students also need to realize that the writing stage only begins with drafting. This draft needs to be redesigned before it is finished. Teachers can learn much from observing their students working on various drafts.

Students will vary in their approach to the writing process according to their developmental pattern, their degree of skill, their interest in the topic, and the type of writing they are attempting. Studies of composing processes show that there is no one writing process appropriate for all writers, and that the elements needed in composing appear at different times in the cycle and occasionally at the same time.

While students are drafting, the teacher is able to observe how an individual student uses the composing process and to decide where intervention assistance is necessary to help all writers develop their own most comfortable and efficient process. For example, if a writer is blocked and seems unable to write, teacher intervention might include a shift in topic, a three-minute free writing activity to promote fluency, a look at a journal entry, or a quiet thought provoking discussion of the assigned topic. Writers need to feel comfortable with their topics. Teacher assistance provided initially, both as instruction and as intervention, can be most productive.

Later as students begin to revise, errors will be noticed. Some writers will need to rewrite completely; others will just need to correct grammatical and spelling errors. Some writings will need to be reorganized, while others will need a new or different conclusion. Teachers can establish an emotional environment that will allow and encourage students to make revisions freely until they are satisfied with the product. In this way, students can elaborate, change information, correct errors, and receive peer/teacher response in a positive atmosphere.

Secondary schools may wish to establish a writing laboratory for all students, but especially for those needing intervention. The focus needs to be on normal writing development through writing and sharing writing, not on remediation.

Elementary and intermediate/middle schools need classroom writing corners that include a storage place for writing folders. Students enjoy having a separate place to think and write.

ENGLISH COMPOSITION

Elementary and secondary students both need a place for individual as well as group writing. Tables are especially helpful for groups working and talking together. Students will be writing at the various stages and should feel free to ask for peer or teacher assistance.

Students do not need to write the same assignment during the same amount of time, nor does every writing need to be evaluated by the teacher. Peer responses to writing can be most beneficial for the writer as well as for the peer reader.

Students do need to see the teacher writing and sharing. Teachers need to model each step of the writing process. The teacher and the students can learn together. Assignments and topics may come from both students and teachers. While opportunities for writing must be consistently provided, teacher-arranged writing need not always be teacher-selected and teacher-designed. Until student writers develop confidence, teachers may help by suggesting topics and designing motivational assignments.

A good assignment meets at least four of these standards: it is appropriate, stimulating, instructive, purposeful, and measurable. Students need to have the skills (how) necessary to be successful, the motivation (why) to begin and sustain interest and productivity, and the understanding of exactly *what* to do to complete the assignment.

When teaching the writing process, teachers should encourage students to experiment and to share their writings at various stages; schedule writing as a daily activity, but not necessarily at the same time daily; use prewriting activities until the students are ready to write; set reasonable deadlines for work at the various stages; foster writing for communication; and share strengths and weaknesses as a group to promote a feeling of experimentation and progress.

Response

A response is generally a quick first reaction to a writing. Responses serve two purposes. Peer groups can provide student writers with reactions which help to clarify the writers' ideas and purposes as well as to eliminate errors which block comprehension. In addition, as students make suggestions for improvement, they gain a better understanding of the writing process.

Responses can be made following prewriting activities, initial draft writing experiences, final draft writings, revisions, edited writings, and post-writing products. Each type of response needs to be practiced and the purposes for each clearly identified and followed.

Teachers may prefer to begin fostering responses by using anonymous student writings for class discussions. Purpose, audience, and the major focus can be identified; clarity of development can be judged; sequence can be checked for accuracy/appropriateness; and selection of vocabulary can also be discussed. Initially the teacher may not wish to mention possible negatives in spelling or usage unless they render the writing unreadable.

Guided practice in locating and discussing various components of writing products should occur before students independently respond to each other's work. Some such competence is necessary so that students learn from having other students respond to their writings.

Initially, teachers may wish to focus student responses on one or a limited number of points. In this way, the writer will not be overwhelmed by the response. Both positive and negative points need to be given attention.

Peer responses may be even more valuable than teacher response for some students. Responses made by one's writing partner may be accepted as non-threatening, positive assistance.

Responses from group conferences of three to five students can be efficient and effective in guiding the revision process. Groups can be formed by similarity of ability, by diversity of ability, by personality/ interest, and by student choice. The teacher needs to work with each group throughout the revision process as students learn how to revise in accordance with peer responses. Students who perform well in the response stage either as writers or responders will be better prepared for the stages of revision and editing where, perhaps, changes will be necessary to improve the final product.

Teachers also need to share (for discussion) model writings that demonstrate strengths in various writing components. Of special interest may be writings which show the author's own revision and editing changes. Students need to see that established authors also agonize over finding the "perfect" word or the best introductory sentence/paragraph.

Activities to promote responses to writing include the following:

- Conduct whole-class response sessions by using unidentified copies of a student work.
- Provide response forms that allow students to make written responses individually or in small groups.
- Give students two versions of the same writing and ask them to comment on the differences.
- Establish small response groups in which students can either share their work orally or exchange papers.
- Establish individual consultation times to look with a student at his/her writings.

ENGLISH COMPOSITION

Revision

Revision involves a process during which a writer rethinks the product many times while writing and rereading it to check the effectiveness of the communication. Revision includes rethinking the unity, development, order, clarity, emphasis, and word choice. The organization of the writing is examined to see if supporting information, qualifying details, concrete examples, sensory details, and transitional words, phrases and sentences might be needed. Some writings also need to be revised to add the how, where, what, and when.

Rewriting has two parts, revising and editing. Writers need time to practice revising before editing and proofreading can be useful. Since the revision process is designed primarily for writings that are intended for audiences, writings completed to promote fluency need not be carefully evaluated and revised. However, if a writer wishes to rewrite a private journal entry, for example, to improve the product, revision is an acceptable step.

Regarding the total writing program, the teacher should spend more class time working with individual students and less time giving full class instruction. Some writing programs require a certain amount of writing with revisions counting in that requirement. The student then selects one writing per week or unit from the personal work folder to be graded on certain pre-set criteria. Teachers, thus, have more time to work with students on the various stages, prewriting through post-writing.

The teacher-student revision conference is of great importance. The teacher may wish to focus on only one or two major problems at a time. This will help to provide the necessary intervention technique at the appropriate time without overwhelming the writer. Students need to view revision as a natural part of the total writing process. Not every revision, however, needs a formal teacher conference. Students can develop the ability to revise independently. Until they demonstrate that ability, they need teacher guidance as well as the time to spend (often more than one day) to revise and complete a finished product. Teachers can learn much about the student's revision process by requesting drafts be submitted with the finished product.

Internal revision is necessary if the writing does not say what the writer intended. External revision comes after the writer shares the writing with the intended audience. If the message is not clear, revision is necessary. Talking together, as in the response stage, allows reactions and clarifications that written comments often fail to achieve.

Teacher-made revision checklists help the writer, as well as a peer response group, to focus on general procedures and specialized writing skills to be included. These checklists keep the attention directed to the skills relevant to the teacher's immediate goals. Checklists must not encourage the search for mistakes, however.

The writer should first identify in what area assistance is needed. Then, the response group members should be directed to locate a positive component before using the checklist to identify problems for revision.

Revision checklists help the readers know what to look for, how to describe what they find, and why their suggestions would improve the writing. The focus of such a checklist is on form, content, clarity, and the general coherence of the writing. Some checklists ask the reader to identify the best section and tell why it is good, identify one section that needs revision for cooperative revision, and identify goals for future writing.

Revision activities might include the following:

- Have students revise published sources and/or peer writing.
- Encourage pairs of students to exchange papers and show each other where revisions for clarity might be made.
- Establish a daily writing time. Give the students a declarative sentence and ask them to revise it into a vivid paragraph by using concrete and sensory details.
- Form student response groups to practice revision with revision guides or revision checklists.

Editing

Editing is the correcting of a piece of writing. While editing may be done throughout the writing process, the major editing occurs before the evaluation and post-writing stages. A variety of people, including peers, teachers, parents, and volunteers, may work with the student on the editing process.

There are categories of writing components that need to be considered while editing:

- conventions of writing
    - grammar
    - usage
    - capitalization
    - punctuation
    - spelling
    - paragraphing
    - syllabication

ENGLISH COMPOSITION

- diction (appropriate, effective, and precise word choices)
- syntax
- accuracy
- manuscript form
- proofreading

Writing becomes the basis for determining which conventions of writing skills need to be learned by which students at which time. These skills are developed best with writing the language students themselves produce. Students should be encouraged to edit their own writing by listening to the words being read aloud. Mastery of these writing skills can best be measured by the student's own writing.

There are three general causes of written errors: the difference in the sounds of the spoken language, the differences in dialect patterns, and the confusion of half-learned rules. However, just knowing how errors got into student writing will not help the total editing process.

Often writers do not see their errors because they know what the writing means, while some readers see a meaning that was not intended by the writer. Teacher guidance is necessary to assist in the initial location of errors in the editing process.

If errors are labeled, teachers can study the error patterns to see if they are random or systematic. Analysis of errors demands that the reader interpret what the writer intended to do. This process is necessary as the appropriate intervention strategies are selected for instruction.

The skills necessary to make effective use of the symbol code are called mechanical conventions. If instruction focuses on these mechanics it ignores the writing process and the fundamental relationship between thinking and writing. The mechanical conventions of writing include spelling, punctuation, capitalization, grammar, and usage. Sometimes handwriting is included.

Various skills are learned best at certain stages of the writing process. For example, during revision, grammar and usage can be taught/reinforced while spelling and punctuation may be emphasized during editing. Teachers need to know when a student is ready to learn each skill and also what is the appropriate time to teach/reinforce each skill.

Loban, Ryan, and Squire (1969) suggest that instruction in capitalization should continue through secondary school. Errors in capitalization of proper nouns account for a large percentage of mechanical problems. Errors at the beginnings of sentences result from a lack of sentence sense. They recommend that teachers stress the difference between common and proper nouns and provide instruction/practice time on experiences that will help students develop a sense of sentence completeness.

Teachers need to define specific objectives that insure the teaching of capitalization as a part of instruction in the whole writing process. Instruction can be individualized through pretesting. Since students learn rules as they are needed, capitalization is learned but in relationship to the student's own writing. Organized instructional experiences are necessary to practice applying the rules For example, small groups of students, working primarily on their own writing, can reinforce the instruction that has preceded the writing assignment. Of course, time needs to be provided for student revision and editing.

Mellon (1969) states that as student writing becomes more syntactically complex, errors are bound to occur. Thus, there is a need for a systematic approach to the teaching of punctuation from early elementary grades through secondary school. Punctuation cannot be taught at only one grade level in the student's experience. Students need to use their own writing to reinforce what they learn about punctuation.

Diagnostic tests will help to determine what items of punctuation need to be taught to the entire class or to individual students. Dictation experiences which require students to punctuate, using punctuation they have learned, help to reinforce the rules. Frequent short punctuation drills, both oral and written, are preferred to the teaching of rules, although rules may be helpful when used with drills. Students can work in small groups to practice skills not mastered.

Spelling can be taught effectively throughout the school experience. Spelling instruction should begin in the early elementary grades and continue through high school for some students. (Mellon, 1975). The most recommended methods for teaching spelling are test-study-test, self-corrected lists, and individualized instruction (Petty, 1968; Allred, 1977; Sherwin, 1973). More learning takes place when specific spelling lists are presented and ongoing instruction takes place.

Fitzgerald (1951) recommends that a pretest be given at the beginning of the school year covering all the words to be mastered that year. Test results will show the teacher the kinds of spelling errors that the class will face and the students will note the unknown words. Weekly spelling lists could then be devised that would focus on unknown words.

The class should be organized to accommodate group instruction, peer teamwork, and individual study. Pretests and posttests for weekly spelling lists should be administered to small groups or individuals on the different levels of progress. Peers can work together to dictate lists and to study spelling.

The most significant thing teachers can do to help students improve their spelling is to help them to develop a "spelling consciousness."

ENGLISH COMPOSITION

Revising and editing skills are essential to helping students find and correct their own misspellings. Students need both instruction and practice to improve proofreading skills. The real test of spelling is the student's own writing.

Fluent handwriting is essential to success in writing. Writers need to write with enough fluency that handwriting does not hinder the expression of ideas. The teaching of handwriting needs to be individualized so that all children have the opportunity to master handwriting skills early in their writing experience so that they are then able to concentrate on the other phases of the writing process. Handwriting should be well developed by junior high. If not, instruction and practice need to continue as part of the intervention process.

As with revising, focusing on one type of error at a time helps students to overcome their writing problems during editing. A proofreading checklist can be used while the teacher directs the writer's attention to one skill at a time.

Through proofreading, students learn that they can avoid making some errors and that they can locate and correct errors that they do make. Student response groups will be of great assistance to some students who are struggling with the proofreading process.

Editing response groups may be organized around student "experts" in capitalization, comma usage, end punctuation, and spelling. Students may move from group to group to check their editing changes with the "experts."

Both instruction and intervention are often needed during the editing stage as newly taught skills are added to the proofreading process. Teachers need to recognize the ongoing nature of both revision and editing. Students need much guidance and practice time before they are independent editors.

Editing activities could include the following:

- Provide students with written standards for editing. A format sheet, proofreading symbols, an editing checklist and a stylebook will help in the total editing process. Editing checklists can be adapted for elementary or secondary students.
- Use the writing components already taught to establish an editing checklist.
- Have a group editing session.
- Dictate sentences for students to write and punctuate.
- Organize editing sessions for students working as pairs and/or small groups.
- Have students edit examples of writing that contain errors on components already taught.

ENGLISH COMPOSITION

Evaluation

Evaluation, or assessment, is only one element in the overall process. It is used to support students as they grow as writers. The purposes for which the assessment is conducted may range from determining specific student needs to assessing the school's curriculum.

The way teachers evaluate will vary with what they want the evaluation to do. Summative evaluation measures student growth, determines program/instruction effectiveness, and compares group achievement. Formative evaluation helps the formation of plans for improved instruction and program effectiveness. The evaluation systems designed for specific purposes must be consistent with the instruction and pupil performance objectives of the program.

There are several evaluation systems to consider when designing a writing program. The following descriptions along with options are found in *Competency Assessment and Testing* in the Implementation Series and will be useful in assessing the student performance in English composition. Although there are many variations of assessment methods, the following descriptions offer some generally agreed upon definitions. (For all methods requiring writing samples, students write a composition in response to a "prompt." Students' papers should be kept anonymous during scoring.)

1. Vocabulary tests—measure the understanding of and ability to see the relationships among words. (Sometimes used as placement or screening tools.)
2. Mechanics and usage tests—measure how well a person recognizes the language forms of edited American English, i.e., the English used by educated users of the language.
3. Essay Scale—involves the selection of a series of complete compositions arranged according to quality. At one end is an outstanding piece of writing, at the other end an inadequate one. The scale may range from four to eight categories. Raters attempt to match each student's writing with one of the "models" on the scale. This method was developed by the California Association of Teachers of English.
4. Primary Trait Scale—attends to the mode of writing (e.g., narrative, descriptive, expository, or technical) and the features which are relevant to the kind of writing (e.g., audience, speaker role, purpose). The Primary Trait Scale may also be expanded to encompass organization, word choice, and mechanics. This method was developed for the second writing assessment of the National Assessment of Educational Progress.
5. Analytical—involves an analysis of the writing that incorporates various categories of skills under two major headings: general merit (including ideas, organization, style, word choice,

and sentence structure) and mechanics (including punctuation, capitalization, spelling, usage, and handwriting). Each composition is ranked by at least two trained evaluators using a graduated criterion-referenced scale. This option yields as many ratings (or scores) as there are categories of skills and may also yield an overall ranking. The score or ranking does not depend upon the mode of writing. Additional information is available from Educational Testing Services, Princeton, New Jersey.

6. Any combination of the above.

Thus, teachers have many ways of evaluating student writing. For large groups of students, they may prefer rating samples holistically or by an analytic scale. For smaller groups, they may use checklists or analytic scales. Standardized tests or teacher-made objective tests may be used for either size group. Objective tests of the conventions of language can reveal a student's knowledge of the mechanics of language. Although data from objective tests intended to measure the knowledge of mechanics correlate well with data produced from writing samples of the same group, such objective test data are more valuable as indicators of student editing skills than of composing skills.

Teachers need to evaluate student writings to reveal strengths and weaknesses that will be discussed during the teacher/student conference. The papers filed in the student's folder can show growth and can serve as an evaluation of the student's progress.

Not every product is revised and edited by the student and evaluated by the teacher. However, most student writing has been judged by teachers and peer response groups and has been revised and edited by the writer, alone or with the guidance of others. These activities put the focus on learning to write and improving the writing process rather than on evaluating the product. Thus, teachers may wish to periodically request that students select a writing from their folders, give it a full revision, and edit it for a final product evaluation.

Teachers of the writing process know that evaluation occurs many times during the writing cycle. Improvement in writing happens as students are guided through the stages of the writing process from prewriting to editing with the focus on a limited number of different writings. If a written response is used primarily as a grading activity, the student may lose the chance to grow in thoughtful expression and also the motivation to explore new ways of self-expression. The purpose for evaluation is not to count errors, but to give the writer a basis for understanding how well the purposes for writing have been achieved. With evaluation, as throughout the writing process, teachers need to be aware that positive comments promote positive writing attitudes which can result in improved writing skills.

Evaluation, or assessment, activities could include:

- Provide students with the time and instructions on how to assess their own writing.
- Promote groups/class assessments of sample writings.
- Work with students to develop a scoring guide for a given assignment.
- Demonstrate how different types of scoring are done.
- Share the assessment criteria and purposes for each assignment.
- Have students keep copies of their writing, including drafts, in a folder for review.
- Provide ongoing staff development in writing for all instructional personnel.

Post-writing

Post-writing encompasses all of the activities that the writer can do with a finished piece of writing. The process element helps the writer realize the importance of his/her own writing.

Post-writing can involve the sharing of written work with an audience, although some writing may best be used for personal enjoyment. Post-writing could also include display and/or publishing. When writers know what the post-writing activity will be, they can write with a purpose and also for a particular audience.

Final products, writings that have been revised and edited, can become a part of the post-writing process. It is a sound motivational strategy to expose these writings to peers and the public. Writers often enjoy hearing or seeing others respond favorably to their writings.

Parents appreciate having the work of their children displayed at the school building or in the community. Thus, the parents not only have an opportunity to view the work, but they are also being kept informed that writing improvement is a priority.

Young Authors programs and conferences are strong post-writing activities for all students at each grade level. Teachers may wish to invite parents interested in writing and/or community authors to help students revise and edit for a specific project such as the compilation of student versions of nursery rhymes. Completion of a student cookbook or local travel guide may also necessitate additional adult assistance. In these cases, the post-writing may include page layout, illustrations, and content/page revisions.

Student newspapers and magazines can be developed at any grade level. Article topics can range from introductions of new students/teachers to editorials on student discipline. Because of the great amount of responsibility and time involved in a monthly newspaper project, teachers may prefer to merely contribute student articles, poems and stories to the monthly parent/school newsletter.

Student written and delivered news material for the school public address system, scripts for school radio/television broadcasts, and plays for student and staff entertainment will help to promote excitement about the language arts activities writing, reading, listening and speaking. However, teachers can recognize and foster this same writing process excitement with a kindergarten student or a group of young students, while dictating and listening to their first language experience story. Teachers may wish to transcribe their story so that they can take it home to read or retell to adults.

Post-writing activities could include the following:

- Print student writings in school publications.
- Allow students the opportunity to orally share the writings.
- Use the school media systems.
- Have the students adapt stories as plays or television scripts.
- Encourage bilingual students to translate their writings into another language.
- Involve businesses in displaying writings.
- Have students complete functional writing assignments such as designing resumes and business letters which will be used.
- Invite an author to share and respond to student writing.
- Encourage students to write for church/civic organization newsletters.

WRITING TEACHING STRATEGIES

Introduction to the Strategies

Ongoing teacher intervention and guidance are necessary as the student moves along writing's developmental continuum. At each stage of the writing process, many intervention strategies are nearly the same but are built on different levels of sophistication.

The following are a variety of intervention strategies for each of the instructional process elements (prewriting, writing, response, revision, editing, evaluation, and post-writing). These examples are designed to help illustrate a few intervention strategies that could set a framework for a program of writing instruction.

The following intervention strategies are not meant to be prescriptive. They are but a few examples of the myriad of alternative strategies that could be used to support a district's intervention program. Having identified areas in need of intervention, the teacher could select these or other alternative strategies to provide the appropriate intervention.

ENGLISH COMPOSITION

The writing strategies do not represent the scope and sequence of a writing program, but rather illustrate that instruction/intervention in the writing process is to be provided K-12 Each district should discover, collect, and distribute to teachers additional strategies that will give sustenance for the total writing instructional program.

Prewriting—Organization

1. Prewriting—Organization Strategy

These seven steps provide a framework for teaching prewriting-organization. The topic and subjects will change to match the age, interests and abilities of students.

- Motivate—talk about topic
- Set purpose—ask, "What do we know..." "What more do we want to know...?"
- Organize chart—add questions/subjects to chart
- Solicit responses—ask appropriate questions to "trigger" thought and recall
  - —add information to chart (information that may only be true in certain cases or may reflect an individual's interpretive comprehension or experiential background can be indicated by using parentheses)
- Note relationships—ask, "What subjects have similarities/differences?"
- Decide on organization for writing—ask "Should we write about all subjects, two subjects, or three subjects?"
  - —ask "Should we include each question or focus on one or a few?"
  - —ask "Should we describe and/or compare and contrast?"
  - —ask "Where/how should we begin?"
- Promote independence—progress from group to pair to individual response and on to writing.

ENGLISH COMPOSITION

KINDERGARTEN—PRIMARY

		SUBJECTS			
	What do we want to know about your pets?	Cat	Dog	Bird	Fish
QUESTIONS	Fur	Yes	Yes	—	—
	Feathers	—	—	Yes	—
	Scales	—	—	—	Yes
	Walks/runs	Yes	Yes	Yes	—
	Flies	—	—	Yes	—
	Swims	Yes	Yes	(Yes—duck)	Yes
	Protection	(Yes—mouse)	Yes	—	—
	Eats meat	Yes	Yes	(Yes—hawk or eagle)	(Yes—eats worms)
	Eats seeds	—	—	Yes	—

INTERMEDIATE—SECONDARY
(General Information)

		SUBJECTS		
	What do we want to know about Ohio's major cities?	Cincinnati	Cleveland	Columbus
QUESTIONS	Location	Southwest	Northeast	Central
	County	Hamilton	Cuyahoga	Franklin
	Sports-baseball	Reds	Indians	Clippers
	Sports-football	Bengals	Browns	Buckeyes
	River(s)	Ohio	Cuyahoga	Scioto Olentangy
	Great Lakes	—	Erie	—

This type of organizational chart will also provide structure for compare/contrast writing such as:

Contrast—cities with/without a Great Lake
Compare—each has a major river(s)

INTERMEDIATE—SECONDARY
(Cause-effect)

		SUBJECTS	
	What do we want to know about the causes/effects of the high cost of foods?	Coffee	Peanuts
QUESTIONS	Weather-cold		
	Weather-rain		
	Strikes/labor		
	Shipping cost		
	War/conflicts		

INTERMEDIATE—SECONDARY
(Specific Information)

			SUBJECTS	
	What do we want to know about these 3 major battles of the Civil War?	Gettysburg	Vicksburg	Atlanta
QUESTIONS	Battle date			
	Battle length			
	Special problems			
	Turning point			
	Leaders—North			
	Leaders—South			

ENGLISH COMPOSITION

2. Prewriting—Organization Strategy

Using a prewriting category structure is an initial step to organizing for the task of writing, whether for the individual or for language experience group writing. This, followed by a transitional structure to assist the students to further organize for writing, will help to produce a better product.

Mini-outline
(one subject)

Introductory sentence (subject)
Body (3 details about the subject)
Conclusion (summary)

Mini-outline
(one general topic—3 subjects)

Introductory sentence/paragraph (topic)
Body (3 subjects with 3 details each)
Conclusion (summary)

As student competency increases, the length of the writing; the type of writing, for example, specific information and cause-effect; and the organizational structure can become more complex. These prewriting organizational skills are a part of the developmental continuum. Thus, they are practiced at different levels of sophistication from kindergarten through high school. The student receives the appropriate instruction to move to more complex levels of mastery or receives intervention assistance before moving ahead.

3. Prewriting—Organization Strategy

Read good literature to the students. Through listening as well as reading have students identify the words that help to "draw a picture" of the scene being described. Also have students identify parts of books that make them feel happy, sad or afraid. These sections can be copied and filed for later use by the student and/or teacher. Thus, these sections can help "model" good writing before the students begin to organize to write.

4. Prewriting—Organization Strategy

Provide a framework for prewriting by listing the information needed to write. The student's level of sophistication will determine the quantity and depth of information provided at the prewriting stage and the type of subject development at the writing stage.

KINDERGARTEN—PRIMARY

Invitation

WHO: All first graders
WHAT: Birthday Party
WHY: Lee's birthday
WHERE: Room 123
WHEN: Thursday at 2:45 p.m. January 13

INTERMEDIATE

News Article

WHO: Pat Hendrixson, age 10
WHAT: Bicycle/truck accident
WHY: Bicycle ran the stop sign
WHERE: Corner of Castlegate Road and Bevington Road
WHEN: July 13, 6:30 p.m.

SECONDARY

Television News

WHO: Dr. J. S. Lloyd, noted area dentist
WHAT: Discovered a new serum—immunity to Pyorrhea
WHY: Cause—overabundance of plaque/tartar
Effect—infection and loosening of the teeth
WHERE: Office laboratory—city's far east side
WHEN: October 19—announced the results of three years' work

ENGLISH COMPOSITION

Prewriting—Fluency

1. Prewriting—Fluency Strategy

These eight steps provide a framework for teaching prewriting-fluency. The topic may change with age, interests and abilities of the students.

- Motivate—talk about topic.
- Set purpose—ask questions about the topic related to the senses.
- Organize chart—add topic and senses.
- Solicit individual "paper and pencil" response—have students quickly write down as many appropriate words as possible in each sense category. Encourage students to add words (quantity is important) in each category.
- Combine individual word lists—build one group/class list for the topic. Discuss the words, the senses, and the topic.
- Promote word variety—encourage students to select words that they would like to use for writing.
- Decide on an organization for writing.
- Promote independence—in using this combined word list progress from group to pair to individual response and on to writing.

KINDERGARTEN—PRIMARY

	See	Touch	Smell	Taste	Hear
Thanksgiving Day	Grandma	Table cloth	Fresh bread	Turkey	
	Turkey		Cranberries	Pumpkin Pie	Talk
	Dining room table	Bowls plates			T.V.

INTERMEDIATE—SECONDARY

	See	Touch	Smell	Taste	Hear
A Big City	crowds	subway turnstile	fish market	foreign foods	subways
	cars	bus token	exhaust fumes	peanuts	horns
	tall buildings				

INTERMEDIATE—SECONDARY

2. Prewriting—Fluency Strategy

Have the students write down as many uses for something as possible in a limited amount of time.

How many uses can you think of for:

dental floss
waste paper basket
rainbow
tin can
ping pong ball

KINDERGARTEN—PRIMARY

3. Prewriting—Fluency Strategy

Tell/read a story or show a movie/television program. Have the students write or dictate as many words as they can remember.

How many kinds of farm animals can we remember from the story?

What will we see at the zoo?

ENGLISH COMPOSITION

4. Prewriting—Fluency Strategy

INTERMEDIATE

Provide mystery stories that have an abundance of descriptive words and phrases. Have students locate and list these "creepy" words for use during the writing stage. Words can later be categorized to facilitate the organization of the writing product.

"Creepy" Words

Objects	Sounds
mummies	growls menacingly
skeletons	cackling voice
trap door	shrieks
rickety staircase	moaning

Touches	Feelings	Sights
cold, clammy grip	sense of evil	cobwebs
bony hands	swept by fear	face taut with fear
claws		dog's fangs

Students will find it easier to begin the task of writing after this type of prewriting exercise has created an interest, stimulated the vocabulary, and provided a foundation for fluent writing.

Prewriting—Sense of Audience

1. Prewriting—Sense of Audience Strategy

Provide opportunities for students to write down or dictate information that will be appropriate to use in a letter to a specific person. The categories provided will help to stimulate thought and will promote fluency during the writing stage.

KINDERGARTEN—PRIMARY

WHO: T. J. Richards, Chief of Police
WHERE: Forest Hills Police Department
WHY: Thank you for our visit
WHEN: Tuesday morning

WHAT DID WE SEE?

police cars
hand-cuffs
fire trucks
jail
uniforms
badge

WHAT DID WE HEAR?

siren
two-way radio
voices

WHAT WAS OUR FAVORITE HAPPENING?

sat in police car
rang siren
saw Flipper, the police dog
tried on a police uniform hat
climbed on the fire truck

INTERMEDIATE

WHO: Stacy Palarmo, Director of Park Services
WHERE: Metropolitan Park Offices, Bessemer, Ohio
WHY: Class field trip—nature walk, tree/leaf classification
WHEN: September 17

WHAT WE WANT TO SEE?

twenty different kinds of trees
nature trails
woods animals

WHAT WE NEED TO KNOW:

What time to arrive?
What time to leave?
Do we bring lunch?
How should we dress?
How many adults are needed for 31 sixth graders?
Is this a free service?

ENGLISH COMPOSITION

SECONDARY

WHO: Dr. Pat Caputo, Director of
Library Services
Main Library
WHERE: River Junction, Ohio

ADDRESSEE'S PERSONAL INFORMATION:

- hobby—Civil War battles and firearms
- collection of Civil War era newspapers

REASON FOR WRITING:

- visited Gettysburg, Pennsylvania
- bought a booklet that mentioned your newspaper collection
- presently writing junior theme on the Battle of Devil's Den at Gettysburg

WHAT YOU WANT THE ADDRESSEE TO DO:

- would like to visit your library and use your newspaper collection
- will be in your area at noon on November 19

Prewriting—Purpose

1. Prewriting—Purpose Strategy

KINDERGARTEN—PRIMARY

Provide a short story on a chart or on the chalkboard. Leave blanks for certain descriptive words. Provide a word list from which the students can select words to make the story either positive or negative.

Long, long ago in a faroff land lived three ________ rabbits. These ________ rabbits lived in a ________ house near a ________ forest. All of the other animals ________ ed them.

Positive	Negative
little	bad
cute	nasty
beautiful	wrecked
soft	scary
lovely	creepy
loved	hated
liked	feared

2. Prewriting—Purpose Strategy

KINDERGARTEN—PRIMARY

Discuss a topic about which the students are interested. Have the students dictate or list sentences that could be used as reasons to persuade someone to do or not to do something such as:

Buy a particular toy.
Wear a particular outfit.
Stop the car for a treat.
Permission to clean my room tomorrow, not today.

Permission to clean my room tomorrow, not today:

"Yes" reasons	"No" reasons
Everyone is going skating.	Grandma is coming today.
I like it messy.	The room is a mess.
If I close the drawer, I'll just have to open it again tonight.	I can't find the carpet.
My favorite TV show is on.	Every other room is clean.
I have homework.	The realtor is coming with people today.

3. Prewriting—Purpose Strategy

INTERMEDIATE–SECONDARY

Provide a short story with blanks in place of many words. Have the students fill in the blanks first using positive words and then later using negative words. Students can be grouped independently, in pairs, or in small groups.

As students share their responses, lists can be made of positive and negative words for each blank. Students should be encouraged to consider the "power of the pen" in changing the reader's view of the story by selecting certain words or types of words. This also encourages the use of descriptive words.

Close to the town in a ________ cabin there lived a young
________ named ________. Early each morning he would
________ out of bed, ________ dress himself, comb his ________
hair and then ________ to the stream to wash his ________ and
brush his ________ teeth.

________ cabin		young ________	
Positive	Negative	Positive	Negative
(an) immaculate	ramshackle	boy	urchin
new	rickety	lad	wretch
			whippersnapper
			imp

4. Prewriting—Purpose Strategy

INTERMEDIATE–SECONDARY

Describe one situation or location. The students can then be grouped independently, in pairs, or in small groups to list both positive and negative words or phrases that could be used to describe the situation in various ways for different purposes. Selecting appropriate words, students could then write with a specific purpose.

Camp Snow Hill is a forest camp on the shores of Lake Como, Pennsylvania. The camp is 25 miles east of U.S. Route 83 and approximately 18 miles from Hancock, New York, the nearest town. Because of the thick undergrowth, camp sites are secluded. Wild life is plentiful and fishing is good. Camp Snow Hill has no electricity. A small spring, about a half-mile higher up the mountain, supplies the water.

Positive	Negative
privacy	insects
quiet	no running water
restful	cold showers
deer/bird watch	no electricity
picturesque	rocky shore

- Persuasive—You are an advertising agent trying to lure vacation visitors. Write a one minute TV commercial.
- Persuasive—You are a camp manager frustrated by the week's calamities and campers' complaints. Write a letter to your boss asking for help/repairs.
- Persuasive—You are a 15 year old enjoying the fishing, hiking, swimming and lounging. Write a letter to a friend encouraging your friend to join you.
- Narrative—You are a father or mother enjoying the best vacation you have had in years. Write to your friends at work telling them about something funny that happened.
- Expressive—You are a first-time camper and find this vacation full of mosquitoes, rain, and hard work. Write your troubles to your friend who chose to stay at a resort.

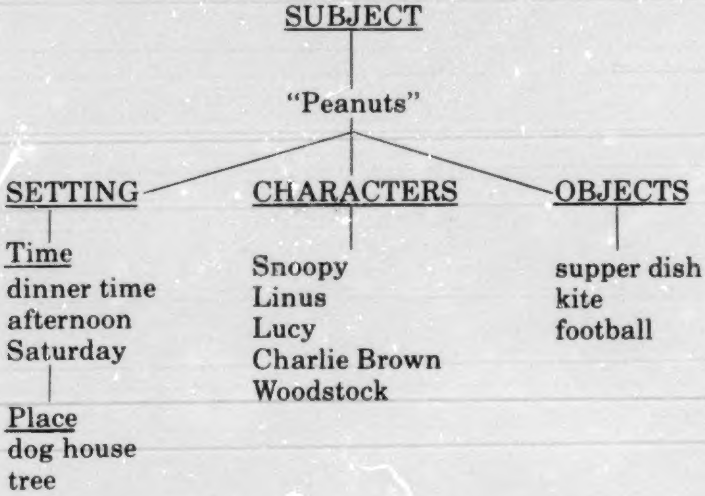
ENGLISH COMPOSITION

Prewriting—Organization/Fluency

1. Prewriting—Organization/Fluency Strategy

A part of prewriting is a combination of organization and fluency. Provide students with a framework for story design. Allow time for students to add key words to the framework before writing. These words will be left visible for the writing stage to encourage correct spelling. The framework can be enhanced as the sophistication level of the student rises.

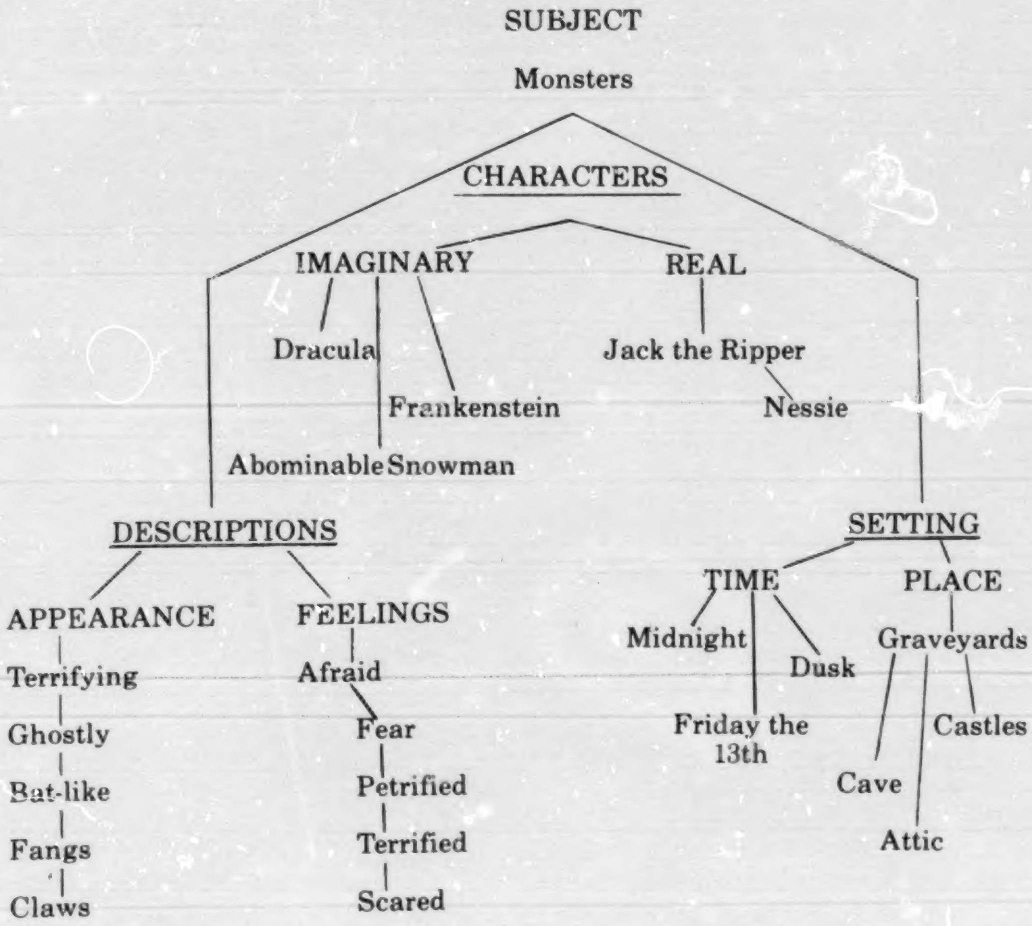
KINDERGARTEN—PRIMARY


SUBJECT
"Peanuts"
SETTING
CHARACTERS
OBJECTS
Time
dinner time
afternoon
Saturday
Place
dog house
tree
Snoopy
Linus
Lucy
Charlie Brown
Woodstock
supper dish
kite
football

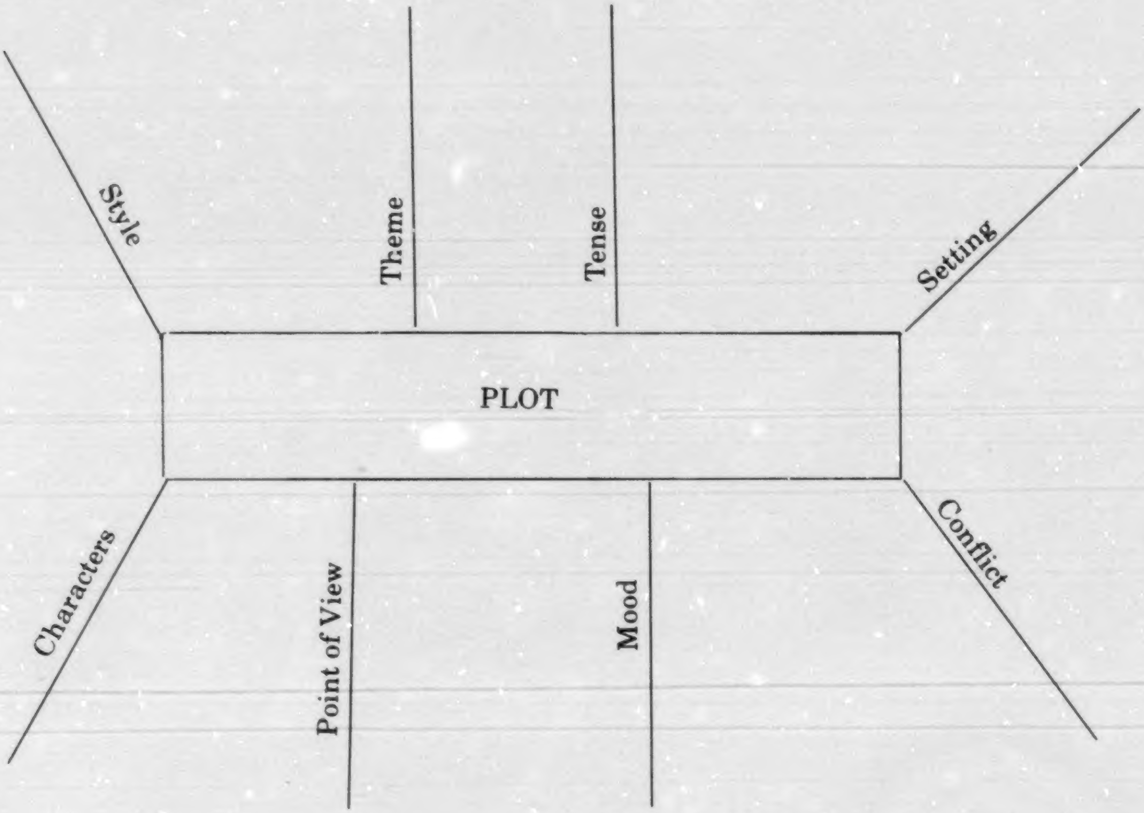
IMPLEMENTATION SERIES

ENGLISH COMPOSITION

INTERMEDIATE—SECONDARY


SUBJECT
Monsters
CHARACTERS
IMAGINARY
Dracula
Frankenstein
Abominable Snowman
REAL
Jack the Ripper
Nessie
DESCRIPTIONS
APPEARANCE
Terrifying
Ghostly
Bat-like
Fangs
Claws
FEELINGS
Afraid
Fear
Petrified
Terrified
Scared
SETTING
TIME
Midnight
Dusk
Friday the 13th
PLACE
Graveyards
Castles
Cave
Attic

SECONDARY


Style
Theme
Tense
Setting
PLOT
Characters
Point of View
Mood
Conflict

ENGLISH COMPOSITION

Writing

Assignments for writing can provide the variety necessary to promote a successful writing experience for all students. As the student gains mastery of both functional and creative writing skills, the level of sophistication increases on the developmental continuum. On the K-12 writing continuum students need to practice the following types of writings:

Functional

Sentence building
Paragraph building
Outline building
Letters
Reports
Research
Essay tests
Application/purchase forms

Creative

Short story
Novel/drama
Autobiography
Biography
Essay
Poetry

1. Writing Strategy

KINDERGARTEN—PRIMARY
Sentence Building

Kindergarten-primary students can begin with dictation and progress through stages of word manipulation into various sentence structures and onto independent sentence construction.

Given these five words:

away the pretty
ran cat

How many ways can you make a sentence using these five words?

What one word could you add to these five words to ask a question?

What punctuation mark would then be necessary?

2. Writing Strategy

INTERMEDIATE—SECONDARY
Paragraph Building

Provide sentences, in random order, that complete a paragraph. Have students order the sentences in the proper sequence.

Later, add to this task sentences that contain irrelevant information. Have the students cross out those sentences before reordering the appropriate sentences.

3. Writing Strategy

KINDERGARTEN—PRIMARY
Paragraph Building

Provide a paragraph. Identify the main topics. Have students add the correct subtopics. Later, provide more than one paragraph so that students can identify multiple topics and subtopics. Still later, use paragraphs that enable students to add details under the subtopics.

The Deer-Mouse

I. Ways it is like other mice.
  A.
    1.
    2.
    3.
  B.
    1.
    2.
  C.
    1.
    2.
    3.
    4.

II. Ways it differs from other mice.
  A.
    1.
    2.
    3.
    4.
  B.
    1.
    2.
  C.
    1.
    2.
    3.

ENGLISH COMPOSITION

4. Writing Strategy

KINDERGARTEN—PRIMARY
Reports

Even young students can begin writing basic reports that will provide the foundation for organizing for research and for essay tests.

Provide a simple fill-in-the-blank format for students to complete when they are ready to do initial reports. Have students use the information to dictate or write a one or two paragraph report.

WHAT ANIMAL: ______________________
WHAT DOES IT LOOK LIKE: ______________
WHERE DOES IT LIVE: _________________
WHAT DOES IT EAT: __________________
WHO ARE ITS ENEMIES: ________________
WHAT DOES IT DO: ___________________
SOURCE: ___________________________

INTERMEDIATE—SECONDARY
Reports/Research/Essay

Build on the primary report skills to foster initial research skills. Have students use the information to write a basic multi-paragraph report. Demonstrate how the information might be organized into paragraphs. These organizational skills will also strengthen the successful completion of essay tests.

Complete this fact form using words and phrases. Do not copy complete sentences.

WHO: ______________
WHEN: Born: ____________ Died: ____________
WHERE: Born: ____________ Died: ____________
WHAT: (created, invented, rules, explored, etc.)
Most famous for:
HOW: (World and/or profession changed)
Interesting comment (extra credit)

BIBLIOGRAPHY:

BOOK ______________________, ______________________, __________
Author's Last Name First Name

____
Book Title

______________________ : ______________________, __________.
Location Publisher Year

ENCYCLOPEDIA

__________________, __________________, "__________________
Author's Last Name First Name Article

____,"

____
Book Title

__________________, __________________, __________________.
Date Volume Pages

5. Writing Strategy

KINDERGARTEN–PRIMARY
Short Story

Have a student dictate or write familiar stories that have been read or told to the class. As a group check sequence and add details to this basic story framework. Discuss ways to begin and end a story and also the basic elements of fiction, including plot, setting, and characters.

Make assignments that build on past knowledge and mastered skills. Provide time to practice each element of fiction in a variety of ways.

Characters—Switch the physical description and the personality traits of two major characters in a well-known story. Let the student discover how the story would be different if the characters had been described differently.

"Cinderella"

Cinderella		Step-mother	
beautiful	kind	ugly	mean
hardworking	loving	lazy	pushy

Response

1. Response

Students need response to their writing from both peers and teachers. Initially, teachers may wish to focus peer response on one or a limited number of points. Teachers as well as these peers need to identify a positive component before sharing suggestions for improvement. Shared response can help to prepare the writer for the revision and editing stages.

Responses can focus on:
- Content
- Style
- Focus
- Form
- Structure
- Mechanics/usage
- Spelling

The instructional tone of the responses can foster:
- Correction
- Encouragement
- Positive attitude

KINDERGARTEN—PRIMARY
Focus

Ask students to respond to the following types of questions about a student's writing:

1. What do you like the most about Leslie's report on igloos?
2. Has Leslie presented too many extra details that don't belong in the story about igloos?
3. What sentences might we remove from Leslie's story?

INTERMEDIATE—SECONDARY
Content—Mechanics

Ask students to respond to the following types of questions that focus on skills taught about a student's report:

1. What do you like the most about Pat's report on Australia?
2. Are details supplied to support the content statements?
3. Does the organization of the report help the reader to understand the content?
4. How could Pat organize the content in a clearer manner?
5. Carefully read each sentence. Do the verbs and subjects agree?

ENGLISH COMPOSITION

Revision

Revision allows the writer to rethink/rewrite the product to improve the effectiveness of the communication. Types of revision include:

Adding
Eliminating
Altering form
Reorganizing material
Expanding information
Creating transition
Relating material
Emphasizing ideas
Subordinating ideas
Improving language usage
Creating immediacy
Initial proofreading
Clarifying
Elaborating/Extending

Response groups and/or teacher response can provide the initial direction for revision. Revision guides can direct the writer's attention to the components of writing that have been taught. The guide focuses on form, content, clarity, and general coherence.

1. Revision Strategies

KINDERGARTEN—PRIMARY

- Provide two or more sentences that could be combined. Have students, as a group or individually, combine the sentences.

  Tim has a pet cat named Simba.
  Tim has a dog named Arf.

- Provide two or more sentences that have been combined that need not have been. Have students decide if and how they should be divided.

  Alice Kay bought a new pair of shoes and read a book on Columbus. She wants to visit the zoo.

- Give students a paragraph that could be divided into two separate paragraphs. Allow them the opportunity to separate the paragraphs at the appropriate place.
- Add a sentence or sentences that do not belong within a paragraph. Have students identify/remove the sentences so that the paragraph makes sense.

2. Revision Strategies

INTERMEDIATE—SECONDARY

- Sentence combining and paragraph reorganization can also strengthen mastery of the revision stage for intermediate and secondary students.
- Students also need to practice selecting a replacement for an inappropriate or overused word. Teacher constructed experiences, focusing on these skills that are in need of improvement, will help students learn to revise effectively. A thesaurus will be helpful for completing this process.

  First identify the overused words and then any inappropriate words. Revise by replacing these words. You may use your thesaurus.

  > Joanne wore her nice coat as they walked together to the nice department store to shop. They walked through each floor of the store looking for a nice shoe sale. She needed a nice pair of shoes for her graduation.

- Provide a paragraph from a book, magazine, or newspaper. Have students underline every seventh word and revise by changing these words without altering the paragraph's meaning.

  > Ohio is one of the leading manufacturing states in the United States. It stands third, behind California and New York, in full value of all manufactured products. Many people have moved here so they could toil in the state's busy factories.

- Provide a paragraph that students can revise through reorganizing and sentence combining.

  > Ohio got its name from the Iroquois Indian word which means "something great." Ohio is now called the "Buckeye State" because of the many buckeye trees that once grew here. The Iroquois used "Ohio" to describe the Ohio River which forms its southeastern and southern borders. Ohio of the past had many canals. There used to be many railroads which linked Ohio with other states.

- Provide sentences in which the meaning is not clear. Have students make changes that will help to clarify the meaning.

  > Sally has a dog named Lassie. She cannot reach the table top. She has to stand on a chair.

ENGLISH COMPOSITION

- Have students each write an informational paragraph on a selected topic. Later, have them expand it by adding two more related pieces of information in a way that will make it impossible for a reader to know which pieces have been added.

Editing

As with revising, focusing on one type of error at a time during editing helps students to overcome their writing problems. A proofreading checklist can be used by the teacher to direct the writer's attention to one skill at a time. Skills can be added to the checklist as they are taught from the developmental continuum. A partial checklist might appear as follows:

PROOFREADING CHECKLIST

Language usage
- ____ Capitalization
    - ____ Initial word in sentence
    - ____ Proper nouns or adjectives
    - ____ Pronoun I
- ____ Punctuation
    - ____ End marks
    - ____ Commas
    - ____ Quotation marks
    - ____ Apostrophe
    - ____ Colon
    - ____ Semicolon
- ____ Agreement
    - ____ Subject/verb
    - ____ Subject/object pronoun
    - ____ Pronoun/antecedent
    - ____ Noun/modifier
    - ____ Tense
- ____ Sentences
    - ____ Joined with punctuation and conjunctions
    - ____ Complexity (simple, compound or complex)

Additional items for the checklist could include various construction components such as the paragraph, spelling, word choice, and/or awkwardness.

1. Editing Strategy

PRIMARY—KINDERGARTEN

Editing begins with initial proofreading skills. Provide students with short sentences/paragraphs that need editing for specific skills. It is easier to teach proofreading by using other people's writings.

Spelling—
The blue wagin was filled with seven kitens.

Capitalization—
when is mrs. watt going to king's island?

As these proofreading skills are mastered, combine the skills taught for proofreading exercises.

Spelling and Capitalization—
MR. jacob drove me to the circis at columbus.

2. Editing Strategy

INTERMEDIATE—SECONDARY

Through proofreading, students can learn that they can avoid making some errors and that they can locate and correct errors that they do make. Provide students with a proofreading checklist that indicates the skills that have been introduced. Have students proofread for one or two types of errors at a time. This process will help to reinforce the previously introduced skills.

Initially, provide a typed copy from a published or teacher prepared source which has been changed to include errors of various kinds based on the skills introduced that need to be mastered/reinforced. Later, students should work at editing a peer's writing before being held responsible for their own proofreading. Practice in finding the errors of others will sharpen the student's ability to locate his or her own errors.

Part of editing includes making the final check on a report or research paper to make sure that footnotes/sources are properly listed, the correct format has been followed, and all necessary information has been attached in the appropriate location.

Evaluation

Evaluation or assessment is only one element of the writing process. It may be used to determine student's needs/progress or to assess the school's curriculum.

ENGLISH COMPOSITION

Teachers may assess the finished products of students. Every student product need not be formally assessed. The purpose of assessment is to give the writer a basis for understanding how well the purposes of writing have been achieved.

Teachers can use the information from their revision/editing checklists to build an assessment checklist students can use to assess their own writings. A "best" writing of the week can be student selected for teacher assessment. The teacher uses the same assessment items for evaluating the writing.

1. Evaluation Strategy

KINDERGARTEN—PRIMARY

Observations, plus teacher/student dialogue, will provide the framework for primary student assessment of writing skills. Teachers can observe and/or ask the student questions related to the following:

A. Language Usage

1. Watches while teacher writes down the dictated story. ________
2. Provides a title for the story. ________
3. Uses complete sentences. ________ (number ________)
4. Uses words appropriately. ________ (number ________)
5. Uses a variety of words. ________ (total different words ________)
6. Uses end marks correctly. ________

B. Construction

	Strong	Satisfactory	Weak
1. Introduction			
2. Body			
3. Conclusion			
4. Sequence			

2. Evaluation Strategy

INTERMEDIATE—SECONDARY

Provide a self-assessment checklist for students to use as they select which writing to submit for teacher evaluation. The components included will focus their attention on expectations as well as provide a record of progress over a period of time. By having students tally sentences used, for example, the teacher is provided with immediate assessment information on the student's working knowledge of complete sentences.

A self-assessment checklist could include the following previously taught components:

A. Global Language Usage
  1. Complete sentences ________
  2. Total words ________
  3. Total different words ________

B. Refined Language Usage
  1. Capitals used correctly ________
  2. Punctuation used correctly ________
     End Marks ________
     Commas ________
  3. Agreement ________
     Subject/verb ________
     Pronoun/antecedent ________
  4. Number of combined sentences ________
  5. Number of adjectives used correctly ________
  6. Number of adverbs used correctly ________

C. Construction

	Strong	Satisfactory	Weak
1. Introduction			
2. Body			
3. Conclusion			
4. Logical sequence			

ENGLISH COMPOSITION

Post-Writing

Post-writing encompasses all of the activities that the writer can do with a finished piece of writing.

1. Post-Writing Strategies

KINDERGARTEN—PRIMARY

- Print students' dictated or written stories in the school parent newsletter.
- Encourage students to read their writings to their peers. A classroom "radio station" might encourage peer sharing.
- Have local businesses display writings and/or sponsor having them printed as a part of their newspaper advertisements.
- Laminate writings to make placemats for parents.
- Have students complete a group project such as a cookbook, local history, or class biography.
- Invite an author to visit the class to share and respond to student writings. Encourage the authors to share personal experiences in writing such as early writing handicaps or successes.

2. Post-Writing Strategies

INTERMEDIATE—SECONDARY

- Print a class or school newspaper. Direct students to use their interests and skills to write for such columns as "Sports," "Local News," "Pet News," "Garden Hints," and "Poetry Corner."
- Use the school's public address system as a radio station. Various types of scripts will be needed. Students would have an opportunity to share their poetry and prose.
- Videotaped news broadcasts, plays, and "talk shows" would encourage students to share writings.
- Bilingual students can write cook books, travel guides, and stories in another language. These could be catalogued/displayed in the library.
- Students who are old enough to qualify for jobs will want to learn how to write resumés and business letters. Nothing encourages older students more than getting a job through their own skills.

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